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CLINICAL LECTURES

ON THE

DISEASES OF WOMEN

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ON THE

DISEASES OF WOMEN

DELIVERED IN

SAINT BARTHOLOMEW'S HOSPITAL

BY

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President of the Obstetrical Society.

SECOND EDITION, MUCH ENLARGED, WITH APPENDICES.

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1883.

TO

JOSEPH LISTER,

SURGEON,

MY FRIEND SINCE COLLEGE DAYS,

WHO

BY HIS WORK IN ANTISEPTICS HAS DONE MORE FOR THE SAFETY

OF LYING-IN WOMEN THAN ANY

OBSTETRICIAN.

PREFACE

TO

THE SECOND EDITION.

THERE are here given sixteen additional Lectures, in all thirty-five, not including Appendices, which are additional matter, differing from the Lectures chiefly in form. The new Lectures are published under almost the same circumstances as those of the first edition. In both the Author has not hesitated to make changes and additions, which, however, leave them almost as delivered. Some may appear to have been short, but this arises from the omission of amplifications and illustrations given in the class-room.

The Lectures are called clinical, not because they are strictly speaking such, but because they are so to some extent, and because they are not systematic. They are evidently rather medical than surgical. They were always kept in intimate relation with the work of the wards named "Martha."

It will be observed that the Lectures do not aspire to completeness, being clinical not systematic. Whole departments are omitted; and, in regard to such subjects as are considered, there is not even

that kind of completeness which should characterize a lecture.

Some day, perhaps, they may be rendered more worthy of being presented as a volume to the profession. The reception accorded to the first edition has been the chief encouragement of the Author to produce this second. In America three reprints of the first edition have been published, two at a very low price; and translations have appeared in Italian, German, and Russian. To the various Editors of the first edition the Author expresses his thanks.

The new Lectures of this volume have already appeared in the *Medical Times and Gazette*.

The Author has to thank Dr. Champneys for much criticism and assistance in passing the work through the press.

71, Brook Street, W.
January, 1883.

PREFACE

TO

THE FIRST EDITION.

These Lectures were originally published in the *Medical Times and Gazette* and in the *Medical Examiner*, at the request of the Editors. They are now reproduced in a separate form at the instance of the Publishers. The Lectures that appeared in the *Medical Times and Gazette* are almost word for word as given in the class-room, having been taken by a shorthand writer. Seven were first published in the *Medical Examiner*, from notes taken by Dr. Godson. I would not have brought them out in their present form had I not received suggestions and encouragement from professional brethren, at home, and in France, Germany, and America.

It will be obvious to the reader that naming of authorities and literary references are avoided almost entirely; and this is done for good reasons. The chapters are Clinical Lectures to Students, and the whole object of the teacher was to increase the acquaintance of his pupils with disease. The teacher had no time for anything however slightly foreign to

this purpose. Even if he had had time, the divergence into historical details would, he believes, have detracted from the efficiency of his teaching. It must not be supposed that he attaches little value to authority and to literary detail—quite the contrary. Indeed, he makes much of such matters in his Systematic Lectures, where they find an appropriate place.

He has to thank Dr. Godson for assistance in passing the work through the press.

Finally, he expresses hope that Dr. Fordyce Barker will pardon the liberty he has taken of dedicating the work to him without previously asking his permission.

71, Brock Street, W.
November 1, 1879.

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LECTURE I.

ON ABDOMINAL SIGNS.

When we proceed to examine a case you will observe that we first of all have the clinical clerk's report of the general medical history of the patient; then of the special details of the present illness, including symptoms; then I look for, and dictate a statement of, the physical conditions or signs; and, finally, the history, and symptoms, and signs, are reconsidered in their common bearings with a view to diagnosis. All this being done, treatment is ordained.

The history is derived from the patient, and cannot be relied upon; for, while it rarely contains false statements, it frequently contains errors. Almost every patient has a theory of her case, and she distorts historical details, and even symptoms, to suit her views. In helping to make your diagnosis, history has a limited place; and subsequently discovered errors in history form no excuse of error in a diagnosis which has been given without reserve or with a high degree of assurance.

For diagnosis, signs are sought with eagerness, and their absence is deeply felt, because without them all is insecure. So paramount is the importance of signs, that the physician entrusts the search for them and their description to no one; but does all himself.

You should lose no opportunity of making physical examinations, educating your senses, and especially your hands, by constant repetition, to produce that eruditeness which we

admire so much in artisans of many sorts. You have to look, to touch, to manipulate or press, to percuss, to measure, to listen, and even more than all that.

Begin by examining the abdomen, exposing it to observe its pigmentation, striæ or cracks, wrinkles, baggedness, scars, eruptions. Then feel it carefully all over; and, if you find anything abnormal, you note the presence or absence of the numerous qualities or conditions which I shall presently describe in categories. Keep in mind the arrangement of the cavity into nine regions—epigastric, right and left hypochondriac, three lying above a latitudinal line joining the tip of the ninth rib of either side; umbilical, and right and left lumbar, lying below the preceding three, and bounded below by a horizontal or latitudinal line which joins the iliac crests; hypogastric, and right and left iliac, beneath the three preceding. In mapping, besides the horizontal or transverse lines, you use two which are vertical or longitudinal, and run from the middle of Poupart's ligament. Erroneous notions of the antero-posterior dimensions of this cavity, as a woman lies on her back for examination, are prevalent, being carried into the mind by the familiar anatomical drawings in books, which represent the anterior abdominal wall as far removed from the lumbar spine. Now, in a healthy woman this wall almost touches the spine; the aortic pulsations being, at the navel, frequently visible, and easily felt by the finger slightly depressing the wall.

Examining the abdomen of a healthy woman not overloaded with fat, you recognize localities by the floating ribs, the lower margins of the fixed ribs, the xiphoid cartilage, the iliac crests and spines, the pubic bones, the lumbar vertebræ, and the often accessible sacral promontory; the navel lying on the next lowest lumbar vertebra, and the aortic bifurcation about an inch lower down, and nearly an inch above the sacral promontory. You may make out the position and dimensions of the spleen by percussion; and

the lower margin of the liver may be felt or made out by percussion. Occasionally, in a thin, relaxed, healthy woman, with yielding abdominal parietes, you may, with some definiteness, feel the kidneys ; and occasionally the fundus uteri can be made out. Some authors of eminence say the ovaries can also be felt, and do not add the qualification of " rarely ;" but, for my part, I say that I have never distinctly felt them in the healthy or in the pregnant woman, and I regard the directions given for finding them in the unimpregnated woman as misleading. I shall afterwards point out to you how they may be felt and actually examined.

If, in any part of the abdomen, you find enlargement, or hardness, or tension, you specially investigate its conditions : and the conditions which you have to consider are numerous, for the possible diseases are numerous and various ; and for the diagnosis it is necessary to make out the physical conditions and characters not only of the whole swelling, but also of its parts.

Sensitiveness, tenderness, pain, are conditions made out on this examination, and are mentioned here, though they are not physical, and do not come under a strict definition of signs ; and one of them, pain, is a symptom—the great symptom, indeed.

The region or regions occupied, the size, the prominence, and the shape, of the swelling, are ascertained.

It may be dull on percussion, resonant, or tympanitic ; and these conditions may be present or absent in different parts and at different times.

It may be more or less elastic, or have the feeling of fluid —that is, of having fluid contents ; or it may present fluctuation, a sign quite distinct from that of a feeling of fluid.

It may be mobile or floating, or it may be merely displaceable, or it may be fixed.

It may present no definite characters, and is then called a fulness ; or it may be hard in greater or less degree ; or it

may be a tumour—that is, a defined mass having three dimensions.

It may be growing at various rates, or it may be stationary, or decreasing.

There may be felt in it, or over it, friction, or pulsation, or movement.

If it has irregularity of surface, and no adhesions anteriorly (of a tumour), then movement of it may be seen in inspiration and expiration, or on displacement by the hand. The bowels may also be seen to move or to travel in like manner.

The ear may find it dumb, or may find a souffle or a pulse, or friction, or gurgling, or movement of a fœtal limb.

All these points have in most cases, and in every case of difficulty, to be investigated and considered, and others which I shall mention when treating special departments of my subject.

The lower part of the abdomen is investigated in a different and additional manner—namely, bimanually,—and of this I shall speak again.

LECTURE II.

ON PELVIC SIGNS.

Gynæcological investigations are, of course, chiefly carried out in the hypogastric region and in the pelvis; and the access from below, through the vagina, urethra, and rectum, gives you power of more immediate examination of the pelvic organs than you have of the abdominal organs. You examine from above through the hypogastric and iliac regions; from below, as already said; and, in addition, you can, for the digital or manual part of the examination, combine the two methods, making what is now-a-days called the bimanual examination. By one or more of these plans you can often feel every individual organ as if you had it out of the body—lying before you.

Here your diagnosis is effected by sight and by touch, the latter being done directly, or indirectly by instruments.

You see the pudendum, and, if need be, scan all its parts, thus occasionally finding unexpected disease. The vagina you can see by speculum, and through it you may sometimes see far into the cavity of the cervix uteri; and, of course, you see the vaginal portion of the cervix. The interior of the urethra and bladder may be imperfectly seen by passing a small Fergusson's speculum into or through the dilated urethra. Very little information is gained by passing, as can sometimes be done, a similar speculum into or through the previously dilated cervix uteri. There are

various specula by which you may see the lower part of the rectum.

By the finger, passed through the dilated urethra, you may feel the interior of that channel and of the bladder, or examine simply, or bimanually, the fundus of the bladder and the adjacent uterus and ovaries: but this examination is rarely made; and, when it is done, its object is almost exclusively to find out the condition of the vesical walls. By a vesical sound you ascertain the dimensions, the tenderness, and the elasticity of the bladder. The tenderness and softness of the bladder should also be made out by pressing on it with the finger passed per vaginam. This may also be done bimanually; for in a healthy, and easily examined, abdomen the finger in the vagina can be made to meet and press the fingers depressing the hypogastrium. The bladder is generally felt as a soft indefinable sac; very rarely, even in disease, as a rounded, soft, tumour-like, mass adherent to the uterus, suggesting the idea of a uterine fibroid of the anterior wall or of a vesical calculus.

The position, size, direction, shape, tenderness, and mobility of the uterus and of its parts are made out by the simple digital examination, or by this along with the bimanual. Not rarely, further information, or more exact information, as to these points is sought by passing a uterine probe into the uterine cavity and manipulating with it. Occasionally, still further knowledge is to be acquired by dilating the cervix uteri, and sometimes even the body of the organ, by tents or by some instrument for the purpose, with a view to the passage of the finger into the interior. But the finger is not long enough to reach the fundus uteri, the cavity being dilated, unless the fundus is pushed down on the finger by pressure from above through the hypogastrium. Often even this is not enough, and then a volsella is fixed in the cervix, and the uterus is pulled down on the finger, while an assistant presses the fundus down. It is generally

supposed that, after dilatation, the fundus can be felt from within by resorting to these plans; but that is not always the case. Especially in women with thickly fat and tight abdominal wall the fundus cannot be reached unless the hand is passed into the vagina, and that is a painful and rarely necessary proceeding. For the use of the volsella, and of course for the more severe method, an anæsthetic is generally demanded.

Digital examination per rectum is a valuable resource in uterine disease, for through the anus the finger can reach further parts of the true pelvic cavity than it can through the vagina. Indeed, if the laquear is tight, as is not rarely the case, a fibroid may escape the vaginal finger while it is easily accessible to the rectal. Besides, there are many cases with entire hymen where all necessary information can be obtained per rectum. In a virgin it is always desirable to avoid vaginal examination, and it is rarely required. Per rectum, the size, position, and tenderness, of the uterus and ovaries can generally be well made out.

In a healthy woman the ovaries are often not to be found in any way; but it frequently happens that, in a thin person, favourably disposed for examination, they can be well felt by the bimanual method. In many, if they are low down, they can be easily made out by a digital examination per vaginam or per rectum.

The bones of the pelvis are not to be neglected in vaginal, rectal, and external examination, for they may be the seat of ordinary bone-disease or of dislocation, or they may present painful aching parts, the result of injury, as by forceps-delivery or by ordinary accidents. The state of the sacro-iliac, of the pubic, and of the sacro-coccygeal joints has also to be considered.

Much has been said of diagnosing disease of the Fallopian tube or tubes, especially their dilatation by fluids, and no doubt some degree of assurance may be got by careful

bimanual exploration. But at best the diagnosis, in the present state of our knowledge and appliances, is a very rough guess.

Examining the uterus, you may wish to ascertain its state as regards the patency and rigidity of the canal of the cervix. A stricture (whether congenital or acquired) you will very rarely find, but it is not rare to find a small canal—that is, one which does not easily pass a No. 9 bougie; and you may ascertain rigidity by finding a kind and degree of difficulty passing in a No. 9 through the internal os, or in passing that size which fills up the ordinary capacity of the part; and such urged passing induces spasms like those of characteristic dysmenorrhœa. Most supposed strictures are not such, but mere tortuosities of the channel; or the practitioner is deceived by the point of the probe catching in a fold of the arbor vitæ. If, in such circumstances, he changes the direction, and perhaps also the size, of his probe, he will find the passage free enough; and he may further facilitate the little operation of so-called catheterising the uterus by pulling on the anterior lip of the cervix seized by a little hook to straighten the channel.

If you find anything in the pelvis that is unusual, you go over on it all the categories of qualities which I enumerated in my last lecture. Some of them are not to be got, such as true fluctuation; and there are some which are very striking here and scarcely remarked in the abdomen. For instance, a swelling, such as a perimetritis, or a parametritis, or a hæmatocele, may be convex or bulging, then flat, then concave as it gradually disappears; and in accordance with these qualities the uterus will be displaced towards the healthy side, and gradually, as the swelling becomes concave to the examining finger, it will be drawn to the affected side, and, with the disappearance of swelling, be fixed or nailed to the affected side.

For all ordinary examinations you use the position on the

left side, called the English obstetrical position. But for a thorough examination of the vulva or of the pelvis you often resort to the lithotomy position, a proceeding very disagreeable to the patient. For bimanual examination the best position is flat on the back, the legs bent, the feet on the table, the finger or fingers of the right hand in the vagina or rectum, the left hand on the hypogastrium. It is common to find Frenchmen practising examination in the erect position of the female; but I never do this, and I say so after a little experience of the plan in Paris. In defence of the method it is alleged that the position of the organs, especially as to descent, cannot otherwise be accurately judged; and I admit that this is a nice and important point for investigation in many cases. Now, mere position of a woman has much to do with descent, but not so much as effort, such as lifting or bearing down, especially the latter; and this bearing down can be done in the lying position. You will notice that in making examinations in "Martha," I often urge the woman to bear down strongly, and encourage her to continue the effort, and in this way I get all the information wanted. On her side a woman can easily press out a replaced procident uterus, which kept inside while she came into the theatre and got on the table. A woman can often, while lying on her side, by bearing down, press out a pessary which keeps its place very well during her ordinary every-day life. In the same way, when examining the lowest part of the rectum, you get it exposed by the bearing-down efforts, which press out internal piles if there are any. When you assist a woman to press out a prolapsed womb, you push the hypogastric region in the axis of the brim; when you assist to express piles, you pass the finger into the vagina, and press that part of the posterior wall of the vagina which overlies the anus.

LECTURE III.

ON SYMPTOMS.

In my former two lectures I have gone over the various signs of disease which offer themselves or are obtained by searching. Signs are facts; they are of a positive character; they may be at any time verified; they never mislead, if properly used. Symptoms are quite different; they are generally statements rather than facts; they are statements of subjective conditions; they are generally matter of testimony, accurate and true, or inaccurate yet intended to be true, or inaccurate and intentionally false: they are seldom capable of verification. The absence, indeed, of symptoms may be an important symptom or indication.

Pain is the grand symptom; take redness or hardness as a sign, and contrast the two, and you will see easily the distinction between signs and symptoms. But, though the distinction is important and desirable, yet it is not always to be made. There is no distinct line in practice between some symptoms and some signs. For instance, when you are told that a woman is sick and vomits, that is generally more of a symptom than a sign: it may be so even if you see the vomiting and the vomit, for it is not very rare for a woman to vomit quite artificially, hysterically, or with a view to deceive; and in this case there would be the sign, vomiting: but the greater truth is expressed in classing it as a symptom —artificial vomiting,

Symptoms may be direct, near, or proximate. They may

be indirect or remote. They may be hysterical—and that does not mean spurious or nonsensical or false,—and such hysterical symptoms may be coincidences or consequences of the supposed known disease. Lastly, they may be regarded as diseases rather than as mere symptoms; thus, the acute fatty degeneration and fatal sickness and vomiting of pregnancy is in one sense symptomatic of pregnancy, and the symptom is more important than the originating condition. An epileptic attack may be a symptom of ovarian irritation, yet it is a disease and more important than the originating one. So, in another department of medicine, a neuralgia with herpetic eruption may be a symptom, and more immediately urgent than the diabetes which led to it.

Now for direct or near symptoms, and the only one which I shall speak of is pain and the allied tenderness. The latter is pain elicited by touching or interference otherwise, and to it are applicable many of the remarks on pain I am about to make. Now, pain may vary in time of occurrence, in quality or kind, in quantity or continuance, and in degree or severity; and it is to be regretted that, as yet, we have no odynometer, or even good odynometrical resources, to test and measure pain; and consequently we have an amazing amount of error. Many women in their statements exaggerate their pain, and it is unfortunately common for friends to encourage this folly, urging patients to make the most of it; and it is equally true that some women make light of their sufferings.

To be brief on the next point, I must appear paradoxical in my statement, that the same pain causes a very different amount of suffering in different women, and this not from varying degrees of bodily weakness, or of weakness or strength of mind, but from differences in organization in this respect. Then, again, many pains are produced by fear and the attention caused by it; thus, I have known a good,

sensible, woman to suffer very severely from recurrent nocturnal pains arising from an imagined cancer of the womb, and be cured, not by drugs or medicinal treatment, but by the assurance that there was not cancer. Further, most pains are aggravated by attention; and distraction of the attention, if it can be done, relieves or annuls pain.

In studying this symptom in practice, as with a view to deciding on remedies, especially on the dangerous use of opiates in chronic pains, you will remember what I have said, and will say, of degree of pain; and also that most women call any new sensation or peculiar feeling a pain, even although it causes no suffering other than what arises from the bending of the mind upon it.

But, besides knowing that one pain, as in most cases of cancer, is bad from its persistence or constancy, and that another pain, as that of severe dysmenorrhœa, is bad from its intensity, not from its constancy, you must have some rude kind of odynometry. Now, a woman who has a severe or a constant pain will, when interrogated as to her case, almost certainly mention it first, and point to its seat. If, as you often see in "Martha," a malingerer, or a weak, nervous, woman, or one merely alarmed, in the course of describing her case does not mention pain, then you may be pretty sure it is at least neither constant nor severe. Such a patient states her theory of her disease—an ulcer or a displacement, —and her pains are probably achings, which represent her alarm more than her suffering. A pain may be severe enough to destroy the power of eating solid food; or it may partially or entirely prevent sleep; or it may be still more intense, and produce nausea; or still more, and cause retching, or vomiting, and cold sweats, and weak pulse, and all the appearances of great prostration. These latter evidences of severity cannot be gainsaid.

The kinds of pain are infinite, and difficult to recognize because of the indefinite meaning of words. Everybody can

judge the fixedness of a patient under inflammatory pain, the restlessness and groaning or roaring of spasm.

Besides pain, you may have various other direct symptoms connected with walking, standing, lying, urination, defæcation, coitus; also various feelings that are not painful, as I have already said.

But I must now finish what I have to say of direct or near symptoms, and I advise you to be very sceptical of the gynæcological character of a case which has no direct signs or symptoms. A case may be uterine—cancer, for example—without a single direct or near, or remote, symptom, and you conclude it is a case of cancer from signs. In what is called the department of minor diseases of women, it is at present quite common for physicians to diagnose and treat a case as uterine which has no direct uterine symptoms and no signs, or signs of a trivial character, and this leads to much bad practice and injury to patients. Direct symptoms are confined to a region of the body bounded above by the lower lumbar vertebræ and umbilicus, and below by the knees, and I know no exceptions to this, unless, indeed, such as are self-evident, as when the top of a large ovarian sac in the epigastric region becomes inflamed. I repeat that without direct symptoms you should not believe in the existence of a disease peculiar to females unless you have indisputable signs; and I remind you that in the departments of stricture, displacement, and ulceration, and others, there are many signs that are disputable.

But all pains or peculiar feelings within the region indicated—that is, between the navel or lower lumbar vertebræ and the knees—are not gynæcological. An orbital pain does not always indicate ocular disease; and I conclude this lecture with a general remark on the kind of evidence which should convince us that such and such an ache or pain is due to disease of the uterus or of its appendages. If a disease is always or very frequently accompanied by a certain

symptom, that is good evidence of the value of the symptom as an indication, and *vice versa*. If the symptom appears with the disease, and disappears with it or soon after it, that also is good evidence, and *vice versa*. Again, you may have good evidence in a symptom which is only observed in connection with the disease, or observed very rarely except in this connection.

To illustrate, clinically, the value of these remarks, I recall to you an interesting case that was in "Martha" not long ago. She was a weakly creature, unfit to bear hardship or even ordinary work. When asked what she complained of, she told us of retroversion of the womb, and of many pessaries which had been used in vain. When asked what pain she had, she replied pain in the back, and we immediately thought of sacrache or lower lumbar ache, but prudently asked her to put her hand on the seat of pain, when she pointed to the nape of the neck. We then examined per vaginam, and found no uterine disease, no retroversion. The case was not a gynæcological one at all.

LECTURE IV.

ON REMOTE OR INDIRECT SYMPTOMS.

What is a remote or indirect symptom? Only a day or two ago a lady told me she suffered periodically from periodical displacement of the womb. On my hinting incredulity, she then said she knew quite well by an uncomfortable feeling in the head when the womb departed from its right place. No doubt she had been directly or indirectly taught this injurious nonsense. Had it been true, then we should have in it a good example of an indirect and remote symptom of uterine displacement. In pregnancy, of which I speak now only for the sake of illlustration, you have fine examples of remote or indirect symptoms, explained as reflex phenomena or as sympathies. For example, you have the sickness and vomiting of pregnancy, the salivation, the amaurosis—all undoubted remote symptoms and consequences of pregnancy.

It is familiarity with the phenomena of pregnancy that convinces me that there are remote or indirect symptoms of diseases of the uterus and its appendages beyond those I shall presently mention as sure and generally admitted. But the subject has been very imperfectly studied, and I am sure you will, in any case, come much nearer the truth by doubting or repudiating altogether so-called symptoms that are remote, than by adopting the present prevalent belief in their protean character. Looking into popular gynæcological manuals, you will find this protean group around

split cervix, displacement, ulceration, and other uterine diseases and disorders; and I give you an example. A great author and practitioner describes retroflexion of the uterus as producing, or as having for symptoms, dysmenorrhœa, menorrhagia, leucorrhœa, abortion, sterility, obstruction of rectum, ribbon stools, pain in defæcation, intestinal paralysis, disturbance of digestion, flatulence, pyrosis, nausea, disorders of liver, disordered secretions, hysteria, intellectual disturbance, and many, many, more. All of these may accompany retroflexion, no doubt, but they are in no sense symptoms. You will utterly reject all this kind of pathology as worse than useless, and examine the matter more narrowly. I have no hesitation in telling you that, compared with this, you will then find retroflexion to be a very innocent affair. The rules I gave you for testing the reality or truth of direct symptoms apply to these indirect symptoms, and should be rigidly applied in order to your pursuing a right course for your patients.

The mammary sympathies, pain, swelling, tenderness, development of areola, are occasional unchallenged remote symptoms of uterine disorder; so also is renal pain and tenderness; so also are the flushings and curious neuralgiæ of the menopause. I am disposed to believe that a growing fibroid may cause insanity.

I doubt sickness and vomiting as symptomatic of uterine disease, apart, of course, from pregnancy; and a few words are required to explain this doubt. Sickness and vomiting are often seen with perimetritis and with spasmodic dysmenorrhœa. But in the perimetritis it is not a proper uterine symptom, but a symptom of local peritonitis, and is observed in whatever region local peritonitis may be, whether near the uterus or not. Again, in dysmenorrhœa it is observed characteristically only as the result of very severe pain, not as a proper uterine symptom, but accompanying other evidence of the violence of the pain; and as

such it is observed in whatever part of the body such pain may be. Palpitation does not point to disease of the womb, but to anæmia, whether caused by metrorrhagia or not.

A much-talked-of symptom is left infra-mammary pain, and I refer to it to repudiate it altogether. We may go on with our regular work in "Martha" for months without hearing of it, and when it does occur it is inexplicable, or is an evidence of neuralgic weakness or hysteria. The place held by left infra-mammary pain should be given to pain above the left groin—the left [sometimes right] ovarian pain of modern neurologists,—but this is not a remote pain, and you will hold in mind that it has no necessary connection whatever with the left ovary; it is only in that neighbourhood.

Lastly, I must mention remote diseases as symptoms of uterine disease or of its extension. Among such are many renal affections, many cases of phlegmasia dolens, some cases of paralysis, and atrophy, of a lower limb, and rare cases of descending neuritis in the lower limbs. Perhaps, indeed, all remote symptoms are really secondary diseases.

To comprehend this subject do not go to slight diseases or contested pathology, but study the course and history of great diseases—as procidentia, fibroids, cancer, ovarian dropsy. From the beginning to the end of them you will find no such exaggerated symptomatic castle-building as surrounds the minor diseases and disorders, such as the ulcerations, displacements, and split cervix.

Let me dismiss you with a subject for reflection which remains for your study and research. Are there no uterine symptoms or disorders or diseases which are secondary to other diseases, indicative of them, or caused by them? Should the uterus and its appendages be looked on as always governing and disturbing, and not as itself occasionally governed or disturbed?

LECTURE V.

ON MISSED ABORTION.

Missed Abortion is a subject that lies between obstetrics and gynæcology; the cases indeed that I am particularly to dwell upon were brought into "Martha" as gynæcological cases, or cases of diseases of women, more than as obstetrical cases. I do not know any subject better than this for illustrating the value or necessity of extensive knowledge with a view to good diagnosis. If you do not know of a thing, you are quite sure not to suspect it; and, in all cases of difficult diagnosis, if you do not suspect a thing you are almost certain not to find it. This remark is especially true of the subject now under consideration.

A missed abortion is not a threatened abortion, nor is it an imperfect abortion. A threatened abortion is a very common occurrence. When a woman has a threatened abortion she suffers pain, she has bloody discharge, and the mouth of the womb may be found to be open. An abortion may only get the length of being threatened—that is to say, the abortion may be averted and pregnancy may go on healthily,—even when you have been able to feel, through the neck of the womb, the ovum as it hangs in the cavity of the body of the uterus. I have known also two cases in which a considerable piece of decidua was separated and discharged without abortion taking place. It is naturally expected that, as has been shown to be the case in placenta prævia and in the separation of decidua in extra-uterine

pregnancy, the detachment of bits should take place near the internal os, where it would least disturb the ovum. These are cases of threatened abortion, and among them may be included cases of extreme rarity, of abortion of one of twins, while the other remains in utero, and goes on in its development.

This abortion of one of twins may be a missed abortion; or the miscarriage of one of twins may be a missed miscarriage. In that case the fœtus in its envelopes, instead of getting rolled up into a parcel-like form, as I shall describe to you, becomes compressed and squeezed flat between the uterus and the growing ovum, into the condition which, when extreme, is called fœtus papyraceus. I show here a beautiful specimen of fœtus papyraceus, in the fourth month, occurring in a case of twins where there was missed miscarriage.

Missed abortion is neither a threatened abortion or miscarriage nor an imperfect one. In order that you may understand an imperfect miscarriage (of which I have a remarkable instance to describe to you), I must tell you what is a complete or perfect miscarriage. If the fœtus alone, or the entire ovum alone, comes away, the woman has miscarried, or aborted, as it may be; but the coming away of the ovum does not involve a complete miscarriage; and an imperfect miscarriage is often a very disastrous thing. The ovum sometimes comes away alone, without any of its uterine or maternal membranes. Sometimes the fœtus comes away alone, without even the ovuline membranes. Sometimes the ovum comes away, and the maternal membranes or decidua come away imperfectly. Sometimes only a bit of the placenta is left, as in the case that I am about to relate.

Imperfect miscarriage is a dangerous thing, frequently in consequence of the very serious and recurrent bleedings that result from it. It not very rarely leads to death from putrid intoxication or sapræmia, or from septicæmia, or from pyæmia, just as happens after delivery at the full time.

This is especially liable to occur if the miscarriage has come on in consequence of extensive hypertrophic endometritis such as is found in pregnancies occurring during typhoid fever. Imperfect miscarriage is also often disastrous by inducing endometritis, generally purulent endometritis; and this sometimes in connection with putrefaction of the parts left behind.

The case of imperfect miscarriage which I am about to read is in every respect remarkable, and illustrates the subject admirably. M. C., aged thirty-eight, married for sixteen years, has had six children, the last two years ago. On March 14—that is, eight months ago—she miscarried wi h a three-months' fœtus. The placenta did not come away till three weeks afterwards. Subsequent history shows that the whole placenta did not come away even then. For a fortnight before, and for six weeks after, the miscarriage she had considerable bloody discharges. Since then losses of blood have occurred occasionally. She is feeble and anæmic, but otherwise healthy. Nothing abnormal, except limited supra-pubic dulness, discovered on examination of the hypogastrium. Digital examination per vaginam finds the cervix uteri largely patulous, greatly hypertrophied, but not softened as in pregnancy. Through the speculum it is observed to be anæmic or pale in colour, and to have on its inner surface red parts. The vagina contains some bloody discharge, which is not fetid. Ordered to have daily a drachm of liquid extract of ergot. After a fortnight, there being no diminution of the bulk of the uterus, and irregular hæmorrhagic losses persisting, the cervix was dilated by a tangle-tent. On the introduction of the tent, hæmorrhage began suddenly, and proceeded to an alarming extent, two pints being the quantity estimated as lost within fifteen minutes. Mr. Garstang injected through a hollow probe a drachm of tincture of perchloride of iron diluted with an equal quantity of water, with no result. A small fiddle-

shaped india-rubber bag was now introduced within the cervix. It stopped the hæmorrhage. At 11 A.M., about thirteen hours after the hæmorrhage, the bag was a second time expelled. No recurrence of hæmorrhage. At 3 P.M. she was placed under the influence of ether, and the hand introduced into the vagina, two fingers with some difficulty into the uterus. On the posterior wall of the uterus was felt a projecting, moderately hard, wart-like mass, of irregular form, and of extent equal to nearly two inches square. At first it was supposed to be a malignant outgrowth, but as a line was found at which it could be detached, it was recognised as placental. Some difficulty was experienced in removing it by a sawing motion of the nails of the fingers in the uterus. About eight ounces of blood were lost during the operation; but afterwards there was only a moderate amount of blood-tinted discharge. The mass was placental. On its fœtal surface were only small patches of chorion. It was about a third of an inch thick, and dense in structure. The section was greyish-yellow, and bloody, it being almost certain that blood had continued to circulate in some of the sinuses, so maintaining the vitality of the mass. From these sinuses, where utero-placental, the flooding took place. The use of ergot was continued. Nine days after the operation the uterus measured nearly three inches and a half only. The cervix felt not more than half as bulky as it was. Fourteen days after the operation the uterus measured two inches and a half, and the cervix was reduced to natural dimensions.

This woman was very ill; her case was recognized as probably dependent upon miscarriage, although the miscarriage was the enormous distance backwards of eight months. I see no reason to think that, if this woman had not been properly treated, she could have escaped death from continuance of discharge; for the placental mass was alive, and had firm adhesion to the uterus; and when separa-

tion would have taken place I do not know. I think it would not have taken place, but have led to the woman's being drained of blood, and dying. The case was supposed to be connected with a recent miscarriage, because there was no evidence of fibrous tumour nor of anything else that would account for the bleedings and the great size of the uterus. Had this woman's uterus been enlarged by a fibrous tumour so big as to make the cavity measure five inches, the tumour would have been easily felt; but no tumour was felt. The uterus, instead of being enlarged as it would have been by a fibrous tumour, was a flattened mass which could not be distinctly felt through the anterior wall of this woman's abdomen. I call your attention to the great size of the uterus. There was no need of this size to include such a small thing as the bit of placenta which we took away, and the removal of which was followed by the complete cure of the woman, and the diminution of the uterus to its natural size. The case, then, is a very remarkable illustration of the power of a persistently attached piece of living placenta in maintaining the development of the organ, or, in other words, preventing its involution. In this it contrasts with the comparatively small size of the uterus in the next case—that of missed abortion. The case is quite clear. The woman had decidual endometritis affecting a part of her placenta, and making it adherent. The placental decidual endometritis was probably also the cause of her abortion.

Before leaving the case, I call your attention to the circumstance of the great rapidity with which the uterus returned to its natural dimensions after the offending bit of placenta was removed. Fourteen days after the removal of the placenta the uterus and its cervix had both returned to the natural size, after eight months of persistent hypertrophy.

The injection of perchloride of iron by Mr. Garstang

was used before I had become satisfied of the danger of this remedy; arising from its sometimes passing into the veins, causing clotting of blood and embolism. In some such cases death would have resulted, if the embolism had been survived, from sloughing of the parts tanned by the iron.

I now come to the subject proper of my lecture—Missed Abortion. Before entering upon that I shall say a few words explanatory of rare conditions that occur in connection with this department of obstetrics. Protracted pregnancy is entirely denied by some eminent obstetricians; I believe, however, in its occasional occurrence. Protracted pregnancy is the condition of a woman who has passed 278 days—the average interval between the last day of last menstruation and the expected confinement—and at least a fortnight more than this. There is, indeed, no exact definition of the number of days at the end of which pregnancy becomes protracted. If, at this time, a woman's child dies in utero, there is not then protracted pregnancy; she is in a state of missed labour.

It is necessary to say something as to this point—namely, when a protracted pregnancy ends, or when a pregnancy of any kind ends, and the condition of missed labour or missed abortion begins. You cannot say that a woman is pregnant, without misleading your hearers, if she has only a lithopædion in her abdomen; neither is a woman properly described as pregnant who is in the condition of missed labour or missed abortion. This subject is of great medico-legal importance, as I shall show you presently.

Let me first give you the particulars of a remarkable case of protracted pregnancy and missed labour, which occurred in my private practice, and which forms a good illustration of these morbid conditions. The lady was forty-one years of age when she became pregnant for the first time. The uterus was, from the earliest time after its ascent into the abdomen, anteverted or pendulous. It was not the form of

pendulous belly which can be replaced by bandage and held up: it could not be replaced. This impossibility of replacement was also observed during her confinement; and there was no reason to believe that there were any adhesions of the uterus. Her pregnancy up to the end of the natural term was otherwise perfectly healthy. She had a slight degree of generally contracted pelvis. Before giving you the dates I may tell you that none, in the most careful ordinary life, could be more accurately ascertained or more reliable than those I now state. Her menses ended on December 12. On December 15 her husband left home, and did not return for nearly two months. Her confinement was expected on September 17. The motion of the child ceased on September 26. On October 17 she shivered and became feverish without any indication of labour commencing. It was considered necessary to deliver her. The mouth of the womb was artificially dilated, and she was artificially delivered on the following day, October 18. The child was enormous—a female—and it presented evidence of commencing decomposition. The mother died on October 24. This is a case in which you have, with almost scientific certainty, slight protraction of pregnancy, and then the condition of missed labour. After a fœtus's death under any circumstances it is generally discharged within a fortnight. In this case more than a fortnight elapsed after the cessation of movements, and there were never any symptoms of labour.

In some respects missed miscarriage or missed abortion is even more important than missed labour; for, in a case of missed abortion, the history of the woman and her size may have led either to no suspicion of pregnancy having commenced, or to suspicion which may have been dissipated by the further history of the case. In a case of missed abortion or missed miscarriage the important element of suspicion as to the real condition may not have come into the mind

either of the patient or her physician. Mistake is then extremely liable to occur. This is not so likely in missed labour; for in that condition the woman's size will almost certainly have made her aware that she is in an advanced state of pregnancy; and her friends will also know it. I told you that missed labour may be a subject of great medico-legal importance. The same is true, and even more so, of missed abortion or missed miscarriage. Take the case that I am going to read, where a woman passed a fœtus of about two months at the end of a pregnancy (if you so miscalled it) which lasted for five months. If, in such a case, the practitioner, without sufficient care, were to tell the husband that his wife had had a two-months' child, you can easily understand that his natural rejoinder might be, "That cannot be my child, for I have been away from home five months!" Such unfortunate misapprehensions have happened, and the occurrence shows the importance of counting the term of a woman's pregnancy, not up to the time when the fœtus is discharged, but only to the time when it died. If this is kept in mind, the practitioner, in the imaginary case that I have given, will not make the mistake of leading the husband to think that the fœtus just born could not have been begotten by him. It is sufficient to allude to this, the medico-legal importance of it is so plain.

Now, when a woman has a missed miscarriage or a missed abortion, what is the course of events? The fœtus dies; the symptoms of pregnancy are arrested; milk sometimes appears in the breasts; hæmorrhages from the uterus may occur, or they may not. If the liquor amnii is not discharged it is absorbed, and the contents of the uterus either macerate or become mummified. If the membranes remain entire, the process undergone by the uterine contents is that of mummification. It is only when germs are admitted, and generally after rupture of the bag of membranes, that putrefaction and maceration take place, and

the more or less complete dissolution of the ovum. If the uterus has been felt, the remarkable observation may be made, that a woman apparently going on in pregnancy has the uterus steadily diminishing in size, instead of getting bigger; and at last, and almost invariably (not invariably), before the full term of pregnancy, counting from the commencement of it, would have been reached, the ovum is expelled. The expulsion is frequently unexpected. When it is expelled, you have the mass in a state of mummification, nearly dry, of a dirty-brown colour; and the fœtus and membranes are concealed, being rolled up in the placenta, which is too firm to be much compressed, and embraces the whole ovum. Such ova I have had sent to me more than once by practitioners, saying truly that the fœtus appeared rolled up neatly in the membranes and the placenta as in a parcel. That was exactly the case in this instance. In this preparation you will see that the placenta and membranes have been opened up to show the fœtus inside. In our case the edges of the placenta met over the fœtus, embracing it entirely, rolling it up in a parcel-like form. I will now read to you the case.

S. K., aged thirty-one, married eight years, has had four children, the last two years ago; no miscarriages. Had not menstruated for five months when a bloody discharge began. After this had continued for three weeks she became an out-patient under Dr. Godson. She was ordered ergot and strychnine, and the discharge ceased. But it soon recommenced, and she came into the hospital. Examination now discovered a dilated heart with a mitral regurgitant murmur. There was dulness above the pubes for an inch, but nothing abnormal could be felt. Digital examination per vaginam discovered the brim of the pelvis occupied by a moderately hard mass, with which the cervix, which was patulous, was connected by continuity. The uterine probe passed easily into the uterus three inches and a half. The uterus was mobile, not tender,

and formed the mass occupying the pelvic brim. About six hours after this use of the probe, which was withdrawn untinted by blood, pains began. After about eight hours of pains a mass as big as an orange was expelled. Very little hæmorrhage accompanied and followed the birth of the mass. The patient rapidly recovered. The mass was found to consist of the entire ovum in a state of decomposition; except the liquor amnii, of which there was not a trace. The whole presented a dirty-brown colour, somewhat like that of decolorized blood. The decidua and other membranes were rolled tightly around the fœtus, the edges of the placenta meeting over it. The fœtus was of the size of about two months' growth. On the fœtal surface the placenta was covered with rounded projecting masses of various sizes, as of a field-bean, or of a hazel-nut. They were beneath the chorion, and were formed of blood-clot in various stages of decolorization.

This is as perfect a case of missed abortion as you could desire to see. The length of detention, after the death of the fœtus, is five months; the woman then began to feel herself ill because she began to bleed. Observe, in this case, that the membranes remained entire; therefore there was no putrefaction. The whole ovum was in a state of decomposition. Here I cannot avoid pointing out a common mistake in obstetrical writing. Some of the best books on obstetrics divide all children and abortions into living and putrid. That is a very great mistake. Dead children, dead abortions, in various stages of decomposition, are quite common; but putrid fœtus or putrid abortion is quite a rarity. Your nose is a sufficient instrument of diagnosis. A decomposed fœtus is very seldom putrid, and it should not be so described. In our case there was no putridity, but there was the peculiar condition of decomposition which I have called mummification.

In this case I call your attention to what is perhaps a

very important element—the disease of the heart. It is only recently that great care has begun to be paid to the bearings of disease of the heart upon pregnancy and parturition; I know of none paid to the bearings of disease of the heart upon abortion. It is a subject well worthy of attention and study. It would be quite easy to erect a theory of this woman's abortion founded upon disease of the heart. Disease of the heart induces miscarriage frequently. This is not a case of miscarriage; it is a case of missed abortion: therefore, the explanation of the dependence of the death of this child upon the disease of the heart (mitral regurgitation) is far from being made out. This is, as I have said, a subject which, like innumerable others, remains for you to investigate.

You will notice in this case that I introduced the probe, and those who were present will remember that I said at the time, "I do this without hesitation, because, if the woman is pregnant, I wish the pregnancy to end." Before you decide to introduce a probe into the uterus you should always consider the question of pregnancy. In this case it was considered, and the probe was deliberately introduced. You see also beautifully illustrated, in this case, the power of what is called uterine catheterism in inducing labour. A single introduction of a uterine probe within six hours set the machinery of uterine pains a-going efficiently.

LECTURE VI.

ON ABNORMAL PELVIS.

THE subject of this lecture is Abnormal Pelvis. An abnormal pelvis is not necessarily a deformed pelvis; it may be merely a small one. A deformed pelvis may be, as you see in this example, both small and deformed. The most frequent deformity occurs in pelves that are not otherwise small—that are large enough except in the seat of the deformity. In connection with this subject we have a very great piece of progress in obstetrics that is going on at the present moment. Within my days, the introduction of anæsthetics into midwifery was a very great improvement. A still greater improvement, because saving of life is of more importance than saving of pain, has been the applications made of the antiseptic theory, not chiefly in the treatment, but in the prevention of diseases. That is undoubtedly the greatest improvement in obstetrics in modern times, and it is an improvement that is still going on and increasing.

The subject that I am now to lecture on is a part of the great improvement that has been introduced in the treatment of abnormal pelvis. To show you in one sentence the striking character of this improvement, I may tell you that while, not very long ago, I visited an obstetric hospital which was not possessed of a callipers at all—had not such a thing,—now-a-days in many of the best obstetric hospitals, every woman is measured to find out the conditions of her pelvis. I am not recommending you to measure every

pregnant woman, yet these measurings have resulted in very considerable increase of our information; and although this universal application of measurement is not required, still it shows you the contrast with the condition that I have mentioned of a hospital that had not callipers at all. This great improvement has been introduced from Germany, and it is, in the main, an importation from Kiel. In order that you may understand it, I use the old division of mechanically difficult cases into three. You have firstly the slighter cases —and therefore the more frequent, and in that respect the more important cases—where the pelvis is spoken of as a pelvis whose conjugata vera varies between four inches and a little above three. These are the slighter cases. Now, in these cases the improvement that has been made is an improvement in our judgment of the conditions of the labour —an improved diagnosis, so that cases which are still extensively spoken of as cases of inertia (which is, no doubt, generally an erroneous explanation that is far too widely applied), or simply spoken of as "forceps cases," are now more exactly and correctly defined. They are recognized chiefly by deviations from the ordinary progress of labour, or from the ordinary mechanism; and these deviations from the ordinary mechanism are in a very great measure distinctive; especially of cases of mere smallness of the pelvis, the pelvis being otherwise well formed; and of cases in which the deviation of mechanism is produced by antero-posterior contraction of the brim without the pelvis being otherwise small. This is not the place to speak further of this kind of diagnosis made during labour. I merely point it out to you because I wish you to see intelligently the interest attaching to preliminary investigations generally and in the cases that I am to bring before you at a further part of the lecture.

We come now to graver cases—the second kind of mechanically difficult labours, where the pelvis varies from

above three down to, in exceptional cases, nearly two and a half inches in the conjugate. In such cases the great improvement, which is still going on, is an improvement, not in diagnosis, but in our judgment of the method to be pursued in delivering. In such cases it has been common—indeed, it may be said to be prevalent—for students or practitioners to divide themselves into two classes, and one set to swear a belief in version as the proper mode of delivering women with deformed pelvis; while another set believe in the forceps as the proper mode. All such judgments are ill-founded. They are founded upon the measurement of the conjugate as the single criterion; and it was and is taught extensively that according to certain minute measurements of the conjugate, so you should proceed to deliver a woman by podalic extraction after version, or by forceps or by craniotomy. Such a method of judgment must be entirely given up. It is necessary if you are to treat your patients properly, to come to each case unprejudiced, to study it as an individual case in which there are a great many elements besides the mere measurement of the conjugate, some of them more important than any refinement of that measurement. Among these elements are the presence or absence of general contraction of the pelvis, the position and other relations of the head, the state of the membranes, and the state of the uterine retraction.

A similar defect in judgment runs through the recent writings in favour of the increased frequency of the use of the forceps in what may be called ordinary labours. In the case of deformed pelvis it is the measurement of the conjugate that is held to be the criterion of practice—the better judgment founded on the consideration, not of one, but of all the important elements of the case being omitted or lost. In the case of forceps, statistics, whose accuracy requires consideration, are held as showing success resulting from a great frequency of their use, and practitioners are

directed to look at that mere frequency as a criterion of good practice—the better judgment founded on a full and careful consideration of all the particulars of each case, or of each group of cases, being again also omitted.

Although it is out of place, I shall here make one remark on the use of statistics in judging of the forceps-practice referred to. The forceps cases of a forceps enthusiast are unfairly set against the forceps cases of one who rarely uses the instrument. For, if a forceps practitioner delivered all his cases artificially, his so-called success with his forceps cases would be still greater, or his forceps mortality would be less, which is absurd. Practices in which the forceps is often used should be compared with practices in which the instrument is rarely used. We require more diagnostic refinement of the causes and conditions of difficult labours; and it is a part of this diagnostic process that I am trying to teach you to-day. This improvement will diminish the number of cases going by the name of the treatment—as forceps—and describe them less nosologically and more pathologically. No doubt it will diminish also the number of cases vaguely called inertia, or declared to be from an undiscoverable cause. I advise you to trust to Nature as far as you wisely can; to be loth to take a case into your own comparatively ignorant and unskilful hands; and to judge that the success which the forceps practitioner seems to have, as against him who leaves cases to Nature, is a fallacious appearance of success, if it be true that Nature is on the whole better than forceps.

The third class of cases—the gravest cases—cases which run from two and a half inches downwards to less—has also undergone very great improvement, the improvement being in the kind of instrumental treatment, the means of carrying out the design of the practitioner; not as in the former class, deciding what is to be done, but the method of doing it. Upon this third class I shall say nothing more meantime

Now I come back to the first set of cases, which are far the most important—the class of slightest mechanical difficulty. The astonishing result has been clinically arrived at, that in Germany there is a mass of from 12 to 15 per cent. of such cases. I feel quite sure that there will be found much fewer in this country. That is a judgment, not a statement founded upon exact information, because I know no hospital or practice in this country where there has been systematic measurement of every case and observation of the mechanism of early labour, with a view to decide such a question; but it is founded upon this, which is almost positive proof, that in this country malpresentations, cord presentations, face presentations, are rarer than in Germany. I should be very much astonished, therefore, if a careful clinical inquiry resulted in showing that in this country there were so many as from 12 to 15 per cent. of pelves abnormal, as has been found by thoroughly competent authorities in Germany.

In these slightest cases, pelvimetry is most difficult. The pelvimetry in these cases consists in very simple measurements, which, however, you require to learn to make. A practitioner is very awkward in making such measurements at first, and he requires to have a good callipers or other good external pelvimeter. He requires experience, still more, for internal pelvimetry.

How do you proceed in these cases? The patient is undressed, and placed on a suitable bed for examination. The object is to find out as nearly as you can the length of the conjugata vera, and to find out the general size of the pelvis. In all cases these are the two chief things; but in cases of higher deformity you go farther, and measure such things as the distance of the posterior superior spines of the ilia, and make a variety of further observations which I do not enter upon now.

The first measurement is of the external conjugate, C. ext.,

frequently known as D.B., the diameter of Baudelocque. Now, the external conjugate is measured from what you judge to be the first spine of the sacrum, or from a hollow that is generally found below the last lumbar spine, to the mons veneris in front of the symphysis pubis. In a healthy woman that measurement is from seven and a half to eight inches; I shall put it down at seven and a half. There are sources of variation which will easily suggest themselves to you, such as the different amount of fat in different women. Now for the judgment you form from this. You take off two and a half for the thickness of the sacrum; you take off fully an inch for the thickness of the pubes and the soft parts—that is, you subtract quite three inches and a half from seven and a half. If you had nothing else to rely upon, and you found the measurement to be fully seven and a half, you would say a four-inch pelvis—a healthy pelvis so far—four inches. But you will find in practice that this is not a very reliable measurement, therefore you take other measurements by which to correct this. It so happens that in the most interesting case I have to mention to-day the measurement proved correct, or as nearly correct as was to be expected. In this poor woman, whose pelvis I have in my hand, the external conjugate was five and a half; take off fully three and a half, and you have left two inches, or somewhat less.

The next dimension you take is this measurement of the spines, as it is called. The measurement is from the external margins of the anterior superior spinous processes of the ilia, and it is known by the marks I show you here, Sp. il. In healthy women this measurement varies greatly, and it is about ten inches. Then you take another measurement between the most distant parts of the crests of the ilia, and this is known in books as Cr. il., and in healthy women generally measures eleven inches, or fully an inch more than the former. These two measurements afford valu-

able evidence; they are easily taken, and you will find their value excellently illustrated in the cases I have to go over immediately. If these measurements are both small, then you have reason to suspect that the brim of the woman's pelvis is small. If (as in this case) the measurement of the crests is smaller than the measurement of the spines, or equal to it, then you have reason to believe that the pelvis is flattened or contracted in its antero-posterior diameter.

The next measurement is the most difficult; it is also the most important. In the graver cases no other measurement is absolutely required—that is, the measurement of the conjugata diagonalis, which is known in books as C. d.—generally in a well-made pelvis four inches and a half. But in a full-sized pelvis it is often not to be measured during life: to do so would give the woman too much pain: you would have to force the fingers too far in order to succeed. You will see how easily it is measured in some of the cases of contraction that I shall presently describe. This measurement is made by pushing one or two fingers per vaginam so as to touch the promontory with the point of the index-finger if one is used, or of the middle finger if two are used (the index-finger being not long enough). With the nail of the index of your other hand you mark off where the inferior border of the symphysis cuts the radial side of the introduced index-finger, and then you have a pretty accurate measurement of the conjugata diagonalis by telling off the distance between the point of the index-finger if that alone was used, or between the point of the middle finger and the mark you have made with the nail of your other index-finger upon the radial border of the hand. This gives you the conjugata diagonalis. Now, from this you argue as to what you wish to ascertain—namely, the conjugata vera, C. v. The conjugata diagonalis being ascertained, from this take half an inch, and you get the conjugata vera which you seek. There

are a good many niceties about this measurement, but you get as your result in a healthy pelvis four inches from this plan, just as you get it from the diameter of Baudelocque.

These measurements, in the slighter class of cases, are important, but they have to be supplemented by measurements during or after labour, and by observations of the mechanism of delivery.

Now I come to the cases. We have had recently in "Martha" four cases, not of the first or slightest class, but of the second and third.

The first case is one of which this well-known museum preparation may be held to be a representation, for in the patient, whose case I have now to read, the condition was exactly similar. The case is one of osteo-sarcoma of the sacrum; the pelvis being neither small nor deformed, in the ordinary sense of those words; but for obstetric purposes extremely deformed.

E. P., aged twenty-seven, married for seven years, has had four children, all born at full time; complains of almost constant pain in the lower part of the back, greater on the left than on the right side. This pain has been present since her last confinement, seventeen months before admission into the hospital. About the seventh month of her third pregnancy she first felt this pain—about three years ago. The child was delivered by craniotomy. The pain, which had been less or altogether gone, returned about the seventh month of her last or fourth pregnancy. This child was also delivered by craniotomy. Besides the pain she has leucorrhœa and frequent micturition. She has not had a monthly illness for two months, and thinks she is pregnant. She is on the whole a well-made woman. A large solid tumour occupies the posterior parts of the pelvic cavity so as to reduce the available conjugate to one inch and a half or thereabouts. There is a rounded, flattened, and slightly projecting swelling of the base of the sacrum externally and

more on the left than on the right side. The uterus is elevated above the brim of the pelvis, and is three inches in the length of its cavity. She was found to be not pregnant, and was dismissed.

You will observe this case was not measured by callipers, because measurement by callipers could afford us no information—the woman had no deformity to be detected in that way; and besides, the external tumour would render any measurement by callipers useless. The fingers here made the measurement: they measured the available conjugata vera actually and at once, and they found it one inch and a half at the time of her coming into the hospital. Here the measurement of the conjugata diagonalis was not attempted, not required, and it could scarcely have been done. This woman's disease began before the third pregnancy, in which she was delivered by craniotomy, after having had her former children easily enough. The disease was gradually increasing; and now, if she were to fall in the family way again, abortion should be induced to save her from the dangers of delivery by Cæsarian section. She could not be delivered, if she went on to near full time, in any other way. In this woman, then, had we found pregnancy to exist, we should not have hesitated to destroy the pregnancy, in order to save her from the dangers attendant upon delivery of a child at or near term.

Cases of osteomalacia are very uncommon in this country. There is a case at present in one of the medical wards. A woman may be seized with this disease after she has had some children quite easily, and may offer you a history like the history of this woman, of gradually advancing deformity of the pelvis. But in the case of osteomalacia you would have very different conditions. The whole skeleton is modified, and the woman is gradually sinking in stature as well as having her pelvis diminished in its conjugate diameter. In fact, the cases have no analogy to one another except in

the circumstance that you have the deformity of the pelvis gradually increasing from one pregnancy to another, and requiring, as the deformity advances, different kinds of delivery if the woman is allowed to go on to full time.

The next case is one of a commoner kind—a case of generally contracted rickety pelvis. This woman, aged twenty-seven, was brought into Martha ward in labour on June 24 last. She has been deformed since childhood, and is of low stature, measuring four feet two inches. She was married on September 24, and has had no catamenial discharge since then. Pains began on the 22nd ; they were never severe. The cord became prolapsed on the morning of the day of admission—it is pulseless. The diameter of Baudelocque is found to measure five inches and a half, the crests measure eight inches and a quarter, while the spines measure more—eight inches and a half. The uterus has a natural feeling, projects extraordinarily, and has a left lateral obliquity. Through the hypogastrium the child's head can be felt, movable. The limit of the uterus and cervix not distinctly felt, from the pains being slight—it is about half an inch below the level of the navel. The external parts are swollen and congested. The external os uteri is dilated to the size of a florin. The head presents in the first position. Two fingers can with difficulty be squeezed into the conjugate, which is almost an inch and a half, and there is no considerable increase of any antero-posterior diameter of the brim at any part. Some pelvic brims have dilatations at one or both sides of the promontory ; in this case there is no increase. Cæsarian section was performed, and proved fatal from septic peritonitis of slight extent and degree upon the third day. In this case the callipers were used, and they unaided indicated very accurately the kind of deformity and the degree. But the fingers gave an additional measurement by being jammed into the actual and available conjugata vera, so as to measure directly the size of

the conjugata just as in the former case. The pelvis in this case was made out without any difficulty to be a pelvis which was generally contracted or small, highly deformed, with a conjugate of an inch and a half, and its deformity was rickety, the brim having a reniform or kidney shape. I have not entered in this case upon the woman's medical history, which of itself showed that she had a pelvis almost certainly rickety, and involving great difficulty and danger should she come to be confined at or near the full time.

The next case I have to mention is one of a still commoner kind; it is also a case of generally contracted rickety pelvis. This young woman is aged twenty-two, healthy looking, four feet four inches in height; had her last monthly period in the beginning of April, six months ago; had previously been always regular. The legs are curved, nearly symmetrically, the convexity looking outwards to either side, the greatest curvature being at the junction of the middle and lower thirds. The abdomen presents the characters of a pregnancy advanced beyond the sixth month. The posterior superior spines of the ilia are not easily or well made out—two inches apart. The diameter of Baudelocque is six inches; spines eight inches and a half, the left being an inch and a half higher than the right; the crests eight inches and a quarter; the diagonal conjugate is three inches; the sacrum is acutely bent in a posterior angular curvature below its middle. The spine has a slight right lateral curvature in the dorsal region, compensated by one in the lumbar region to the left. The induction of premature labour is recommended as soon as the child is viable, the conjugata vera being judged to be little more than two inches and a half.

You will observe the words I use in regard to this case; that the conjugata vera is "judged" to be so-and-so. In this case you cannot, before labour, actually measure it—you cannot measure it as in the two former cases, by jamming the fingers or palm into it. In all cases that can be done

just after the child is born, and should be done. In the great deformities, such as those of the two women I have previously described, it can be done before labour, but in a case like this it cannot be done. Therefore you have here a judgment as to the measure of the true conjugate: we do not actually measure it.

I have still another case of equal interest which I shall merely mention. It is like the last, but still slighter in its dangerous character. It is the case of a woman who had had eleven children, and of these children she bore only two spontaneously—the first two. Of these two the second alone was born alive, and survives. Now I mention these few particulars of this case to point out to you an observation of great interest—the contrast between successive labours in a slightly deformed pelvis and in a healthy pelvis. Everybody knows that, in an ordinary practice, tedious and difficult cases are expected among the primiparæ: and it is quite true. The observation is correct. In the cases of primiparæ you are not astonished at having a long, expectant sederunt. Subsequent labours are undoubtedly more and more easy, mechanically speaking, till at last they very frequently become far too easy for the woman's safety. But in the case of the first degree of deformity of the pelvis you have, as this case illustrates, the opposite course. It is the first labours that are easiest. In the first labour the woman's power, and especially the labour including the uterine power, is the greatest; and in a woman's first labour she may succeed in forcing the child at the full time into the world, while in subsequent labours she utterly fails from weakness or inadequacy of the powers of labour. In a woman with a slightly deformed pelvis you expect subsequent labours to be the more difficult, apart from any increasing deformity, and simply from the powers of labour being less as pregnancies increase in number—a well-known fact.

I go back to repeat what I said of the second class of deformed pelves, that the measurement of the pelvis, and especially the measurement of the conjugate, even if accurately made, is not the criterion of the mode of delivery to be adopted at the full time, or if premature labour is induced. In the same woman, conditions may vary in different labours; and, in different cases of the same dimension, conditions may vary, so that at one time perforation may be the right operation, and at another time turning may be the right operation. Turning, or rather delivery by podalic extraction after turning, is not to be resorted to unless you have a rational prospect of getting a living child. If your delivery by turning ends in the birth of a dead child it is, to a certain extent, a failure; it would have been better to perforate—safer for the woman. You may not justly condemn your practice retrospectively. Nevertheless, you would not choose to turn a dead child; and if you turn a living one, and do not extract it alive, your operation is partly a failure: perforation would have been better.

You can easily understand that not only may the forceps be used in one instance, where in another instance, in the same woman, turning is the right operation, but you may also be sure that as the forceps is the operation most used in the slightest cases, so it is the more valuable operation. You will more frequently have recourse to the forceps than to podalic extraction after version, but that frequency is nothing at all in favour of the forceps as an operation in jealous rivalry with version. There is no just occasion for any rivalry. Every case must be judged of on its own merits, the whole particulars being taken into consideration.

Finally, suppose you have had a case of this kind. The future treatment of the woman is easier, because in future pregnancies you have the history of the labour in the former pregnancy to aid you. And every woman who has a deformed pelvis should have kept for her a careful re-

cord of the history of her various deliveries, so that the practitioner may have the instruction derivable from former deliveries.

Every woman whom you deliver, who has a pelvis that is at all suspected of contraction, should have five different measurements of her pelvic brim, for the purpose of settling the treatment in subsequent confinements.

Firstly, you have the measurement of the conjugata vera founded upon the measurement of the diameter of Baudelocque—the external measurement; and that you can get at any time. Secondly, you have the measurement of the conjugata vera founded upon the measurement of the conjugata diagonalis; and that measurement you can frequently get at any time, whether the woman is pregnant or not. The third measurement is a measurement that we can only get when the woman is not in a state of advanced pregnancy; it is a measurement which is easily made in a thin woman —a woman who has not much fat in the anterior abdominal wall, nor any kind of abdominal distention. You make out in such a woman through the anterior abdominal flap, the promontory of the sacrum and the symphysis pubis, and measure the intervening distance. Then you have a fourth measurement, which generally can be made, and is made, only during delivery, or immediately after it. I told you that in a slightly contracted pelvis you cannot actually measure the conjugata vera before delivery as you can measure it in an extremely contracted one by jamming the fingers into it; but immediately after delivery it is your duty to do that, and you do it by introducing your whole hand into the pelvis. Every practitioner knows the breadth of his hand at different parts, and he finds out the number of fingers he can pass into the conjugata, or the degree to which his whole flat hand will go into the conjugate. He can thus measure actually at that time the size of the conjugate vera. That is a fourth measurement that

every woman should have made upon her during, or after, her labour, if her pelvis is suspected. There is a fifth which is also very valuable. Of course, in a case of delivery of this kind, you watch the passage of the child's head, noticing the diameter which comes through the contracted part; and, as soon as the child is born, you take your callipers and measure this part, generally near the bi-temporal diameter, and you measure it, pressing your callipers pretty firmly, as probably the pelvis pressed pretty firmly as the child's head came through. This gives you the size of the body that came through.

LECTURE VII.

CHRONIC CATARRH OF THE CERVIX UTERI.

The case, which forms the subject of this lecture, is one of chronic catarrh of the neck of the womb, a disease which has for many years been popularly known in the profession and to the public as "ulceration." This term is pathologically inaccurate, and conveys a very erroneous idea of the formidable character of this disease, so that it has given to patients an immense amount of unnecessary and unjustifiable alarm. When a woman has a genuine ulcer of the womb, such as would be so designated by a surgeon, destroying tissue deeply, you have ground for alarm, for most of these cases are malignant in character: some may be of the character of lupus.

The disease is now properly called by the name I have given it.

First, it is chronic. You are all familiar with acute forms of catarrh, such as the common cold in the head, which for a few days causes so much fever, pain, and annoyance, and then disappears. A woman is liable to similar acute catarrh of the cervix uteri, with copious purulent secretion; but that is not the disease of which we are speaking. Our disease is chronic, for it is of long duration, sometimes being so even when diligently treated. It may last for years or a great part of a lifetime, during which a woman may have borne several children. In the case now in Martha ward we judge from the history that it has lasted at least thirty-two weeks.

Second, it is a catarrh, presenting some of the usual appearances of this diseased condition. The mucous membrane is swollen, red, is easily made to bleed, and secretes a muco-purulent fluid or simple pus. Often the secretion is nearly healthy. In the part of the cervix that can be seen, the mucous membrane has often a punctate appearance, which is called granular. Sometimes there is hypertrophy of the membrane, and it may have folds projecting like cock's combs. The red surfaces are easily made to bleed. They are covered by a peculiar cylindrical epithelium; and often imbedded in the tissues below the surface are little cavities lined with similar epithelium. These cavities may be found beneath a healthy surface, a drop of pus issuing on puncturing where they are, that is, in the neighbourhood of the red parts or even where there are no red parts. These peculiarities of this affection bring it histologically into close alliance with malignant disease of the same part.

Third, it is an affection of the neck of the womb. This part, you must always remember, is physiologically and pathologically, as well as anatomically, quite distinct from the real womb, or body of the womb. The latter is the organ of menstrual excretion and of pregnancy. A neck of a bottle is not more distinct from the body proper than is the neck of the womb from its body. The cervix uteri is a large open gland, and very liable to catarrhal inflammation. This, then, is the disease, chronic catarrh of the neck of the womb.

This disease is of considerable importance on account of its frequency, not on account of its nature. It is in every respect an important disease, yet it is not to be classed with fevers, degenerations, with rheumatism, or gout. If a classification of diseases were made, according to their gravity, I daresay this disease would not be placed higher than the third rank. Many women—but far from all—who suffer from it, pay no attention to it, and can scarcely

be said to be patients in any ordinary sense. In some women it is important from the alarm it causes; in our patient in Martha ward, it was supposed to be a malignant rodent ulcer. In all it deserves attention, and in many demands treatment at your hands.

It is generally said to be the commonest disease peculiar to women; but I am not sure of this. I think it has rivals in chronic ovaritis, and in chronic inflammation of the uterus and ovaries. Yet its commonness justly gives it great interest and prominence.

I cannot pass on without saying a few words on the historical position of this disease, "ulceration of the womb." This history is an illustration, and in some respects not a creditable illustration, of the medical philosophy of this century. It shows that the period of medical enthusiasms, not yet passed, has characters, besides those of weakness, allying it with passing religious enthusiasms. Ulceration was raised into the position of a gynæcological system, and all the diseases of women were managed accordingly. I can well remember—indeed all except beginners cannot fail to do so—how, over the whole world, gynæcological practitioners were busy with speculum and caustic, and thought they had in these tools a panacea for the diseases of women.

Luckily for you, great medical systems are unknown now. Had you been students a generation or two ago, you would have been taught, as your paramount acquirement, a system —of Boerhaave, or of Cullen, or of Broussais; and you would have been carefully indoctrinated, it being held that you could not practise safely without the guidance of a system, and that in all your dealings with your patients you should keep the system before you as your guiding star. Just so was it with the little ulceration system in gynæcology.

The re-introduction of the speculum in the early part of

this century, by Récamier, showed, as a striking and frequent phenomenon in women, a redness around the os uteri, which was called an ulcer. This discovery is the real commencement of modern gynæcology. It ripened into the system I have spoken of. This system is happily obsolete, and we can now calmly describe this important disease. Before leaving this subject let me give you a picture, almost in the words of one of the most eminent European gynæcologists, of the exaggerated views entertained, not above twenty years ago; and I may tell you this picture was at that time regarded as no exaggeration by many, if not most, of the great gynæcologists of this country.

He gives a description of the fearful results of uterine catarrh and so-called ulceration, and blames the neglect of practitioners to examine—a blame which he carefully extends to the management of those cases wherein, all bad symptoms having disappeared without local treatment, he declares the cure to be only deceitful, and a source of dangerous confidence. He also expresses his conviction that, in at least eight out of every ten cases of hysteria, the various nervous lesions depend on some kind of uterine catarrh, and impresses on his medical brethren that in no case of nervous disease in the female does he commence treatment until he has himself made a careful vaginal examination. A few of the nervous lesions he enumerates, including nervous headaches, hysterical affections, palpitation of the heart, neuralgias of all kinds, the most various spasms, hyperæsthesias, anæsthesias, paralyses of the lower extremities, &c. &c. ! !

The great system of gynæcologists at present is the "displacement theory."

Chronic catarrh is very indistinctly referable to certain causes. Among them may be enumerated childless marriage, abortion, or full-time delivery, or cold, or gonorrhœa, or suppression of the menses, as in the case immediately before us.

The patient complains of pain in the back, or, to be more exact, about the base of the sacrumsacrache. This is a common seat of transferred cervical uterine pain, and is well illustrated in the pain experienced by women in labour during the dilatation of the os uteri. Pain down the thighs, feeling of weight about the rectum or lower part of the belly, are common; and there are many other ill-defined symptoms referable either to the disease or to the constitutional disorder which it sometimes induces.

What chiefly attracts the woman's attention in most though not all cases, is an extraordinary discharge. All such discharges, when not bloody, are familiarly termed "whites" by women; but, if there is any occasion to be exact, you cannot rest satisfied with such a mere name. You must see the discharge, before it has dried, on a cloth, or see it *in situ*. Often, and even in severe cases, there is little discharge to show. In our present case, although the disease was extensive, there was little discharge; it was only to be well seen by exposing the diseased part, and observing its thick, yellow, viscid character. You cannot well judge of these discharges when dried on a diaper, for then they are all very nearly alike, healthy mucus appearing as a dirty, greyish-yellow stain. A discharge in cervical catarrh may vary from the nearly healthy crystalline viscid mucus of the part through opalescence to yellowness or greenness. The worst kind is not viscid, but a thin yellow pus.

A milky-white discharge in small quantity is not to be called morbid. It is the vaginal mucus, perhaps in excess, and occurs in very many weakly women after a long walk, or even without apparent cause. A glairy albuminous crystalline, or slightly opaline, discharge is also not to be called morbid. It comes from the cervix. But a yellow or purulent discharge surely indicates disease.

Discharge is to be traced to its source, and this is done by using a speculum, which shows part of the catarrhal

surface with the discharge flowing. The discharge may be wiped off by a mop to disclose the disease better, and often the mop sets agoing an oozing of blood. The duck-bill speculum is the best, but it is not generally used in private practice, because it requires special adjustment of the patient and of the light, and the aid of an assistant. Besides, some exposure of the patient's person is scarcely to be avoided. After it, the best speculum is the mirror-glass speculum, which I show you. These specula are made of various sizes, and you use the largest that you can introduce without difficulty.

The speculum only shows you a part of the disease, the part that used to be called the ulcer. It is now known that the disease often, indeed generally, affects the whole cervical surface, and in some cases, as in the one now in Martha ward, the neck of the womb is so softened, its muscular coat so relaxed or paralyzed, that you can, by a probe, or spatula, open up the external os, and look into the cavity of the cervix. This makes the disease appear very extensive. In most cases the opening up of the cervix is impracticable.

I will now read you some details of the case. M. D., æt. forty-six, married twenty-two years, four children—last seven years ago—was admitted on January 8th.

She says her catamenia commenced at sixteen years, with intervals of three weeks between each period, and continued fairly regular up to the birth of her last child, seven years ago, whence she dates her present illness. Her catamenia then became more profuse, and recurred at intervals of fourteen days. Thirty-two weeks ago the catamenia stopped for ten weeks, and a yellow discharge came on.

During the last three weeks she has had severe sacrache. She has also pain in the hypogastric region, and shooting pains down the thighs. She has also had a flooding, which lasted twenty-four hours, and she continued losing slightly for fourteen days after.

Per hypogastrium, nothing unnatural is found. *Per vaginam.*—Cervix uteri is in normal situation, considerably enlarged by expansion, so that two fingers can easily be introduced; quite soft, red, as if denuded of epithelium, and secreting a viscid yellow muco-pus.

We will now proceed to the treatment of the disease, and this varies according to its severity.

In many slight cases a lotion may be used, partly to keep the vagina clean, and partly also to wash the accessible part of the diseased surface. The lotion may be applied by the patient herself with an ordinary Higginson's syringe, which throws the lotion against the cervix. The lotion is used daily while the monthly period is absent: and often nothing more is required in the way of treatment.

It is a great mistake to use strong astringent lotions of alum or of decoction of oak-bark, for these have only temporary and only apparent good effects. They are injurious by the irritation of the vagina which they produce. A soothing, healing, cleansing application is what you want. Ten ounces of tepid water, holding in solution half a drachm of sugar of lead, is a good lotion; or the same water with half a drachm of alum, and also of sulphate of zinc.

The ordinary treatment is the cauterization, by nitrate of silver, of the diseased surfaces. The stick is to be passed into the cervix and turned round. This may be repeated every third or fourth day for several times. It is not the most successful treatment. Many cases do not yield to it; and frequently the practitioner perseveres with its use, not only long after it has ceased to be useful, but when it has become positively injurious. I have known this kind of treatment continued for years. Long before such a period has elapsed, indeed after several—say about ten—applications at most, in ordinary circumstances, the practitioner should have the case cured, or give it up as not amenable to the treatment.

In the severer cases, such as that which is the subject of this lecture, the best treatment I know of is by zinc-alum. This caustic has the advantage of requiring generally only one application. It was introduced to my notice by the late Dr. Sköldberg, of Stockholm. Sticks of zinc-alum, from one to one and a half inches long, are made by fusing together equal parts of sulphate of zinc and sulphate of alum, and running the mixture into moulds of the size of a No. 6 or 7 bougie. The cervix is exposed, and a sound is passed to find if the passage is clear, and to show its direction. Then the stick of zinc-alum is introduced and left in the cervix. A plug of cotton or lint is placed in the upper part of the vagina to keep the stick from coming out, and to receive the dissolving caustic. After three hours the plug is removed, and the vagina well washed with tepid water. The caustic produces a yellowish-white slough, which, after several days, comes off, leaving in successful cases a surface which secretes healthy cervical mucus, and soon assumes its healthy appearance. This has been the history of the case now in Martha ward. The cervix is contracted, the catarrhal condition is nearly healed, and the secretion is healthy, all within a fortnight, from the use of the remedy once.

Zinc-alum is stronger as a caustic than nitrate of silver, as usually applied. Lunar caustic produces a very thin scale of slough, whereas the slough of zinc-alum is as thick as a sixpence.

In the severest cases, when you have hypertrophy and sometimes a nodular condition of the whole tissue of the cervix, stronger caustics are of most use. Caustic potash, duly applied so as to produce a slough in the thicker hypertrophied lip, is the best remedy. Sometimes the actual cautery proves very efficacious. Cases of this kind are not cases of simple catarrh, but are complicated by peculiar pathological changes. They are sometimes now called erosion, or erosion with hypertrophy.

Finally, there are many very slight cases in which you have no morbid secretion, but merely a little red patch, often called an abrasion, on one lip, or around the os. In such you had better not interfere. You unjustifiably alarm your patient, and you do her no good. Indeed, it is almost certain that local treatment will make matters worse. Bathing and other constitutional remedies may be resorted to. Such redness around the os uteri is to be seen in the adult fœtus which has never breathed. Analogous conditions are frequent in the throat, and frequently subjected to prolonged treatment in vain. I have said that chronic catarrh is important; and have, in concluding, to add that it is advisable you should not go on indefinitely treating it. If, after two or three trials, which may each extend over several weeks, you fail to effect a cure, you had much better give up further meddling in the matter. You do no good to the disease or to the patient: you may, indeed, by frequent and prolonged irritation, produce a tendency to cancer.

LECTURE VIII.

ON RETENTION OF MUCUS.

Atresia of the genital canal may be congenital or acquired; and in either case it may be the cause of retention of mucus by damming up the natural secretions of the parts. But when atresia is present it is not a necessary consequence that accumulation will take place.

Atresia may occur at any part of the course of the genital passage; and I show you here an example of what happens to be the commonest atresia—atresia of the internal os uteri—acquired, coming on in old age, and producing in the specimen I show you a pyometra, the body of the uterus being distended so as to be a hollow globe capable of containing a small apple.

To-day I propose to speak of retention of mucus produced by other mechanisms, and at present I only say that stricture, which is commonly supposed to be the paramount cause of these retentions, is almost unknown to me as such, except, indeed, when it is so tight as completely to close the passage, in which case it should be properly termed, not a stricture or contraction, but a complete closure. Here is a specimen, from the Museum, of old stricture of the external os in a young syphilitic woman. The uterus is acutely anteflected and there is glassy mucus in cervix, but no retention, no dilatation.

Retention of the vulvar secretion is due to want of cleanliness. The sebaceous and mucous secretions get inspissated,

and frequently accumulate in the folds of the external organs. When they do so, women suffer, not always, but often, from slight superficial inflammation; and the cure of this state is to be brought about by cleanliness. But the irritation consequent upon this condition sometimes requires special means for its removal: and this may be very well effected by dabbing the irritated parts with a concentrated solution of boracic acid—an application which will be found useful in other cases of a like kind.

Retention of fluid, which may be mucus or muco-pus, in the Fallopian tubes, I shall dismiss with a very few words, chiefly because, although not a rare thing, it is little known to us in practice. We cannot diagnose it. It may be guessed to be present in consequence of feeling a soft tumour upon one or other side of the uterus, or on both; and sometimes the occurrence of copious discharges through the womb. This disease is called hygroma of the Fallopian tube, sometimes hydrops tubæ profluens. It may be produced by atresia of both ends of a Fallopian tube, or by atresia of one (the uterine) end, while the other is adherent to the ovary, the adhesion being such as to close the tube. But in this disease you may have the occurrence of retention without atresia of the internal orifice. This is a sphincteric opening, and during the child-bearing period of life it must open and close; and there is every probability that some cases of great occasional flux through the uterus are to be explained by the occasional opening of the internal extremity of a dilated Fallopian tube, which closes again. But it is a matter of little practical importance, because the condition is rare, and not to be satisfactorily diagnosed during life. These retentions are known to be certainly sometimes spontaneously cured.

It is retention of the vaginal and uterine mucus that I have chiefly to speak of to-day, and my paramount object is to make you comprehend the mechanism of this retention,

for you will see that the comprehension of it leads to intelligence in many subjects besides those immediately under consideration in this lecture.

I have said that the explanation by a real or supposed stricture does not suffice; and that you may understand the mechanisms that do operate, I shall first speak of two great forces which are not fitted to explain this retention.

There is a force which powerfully draws inwards into the cavity of the belly, called "adspiration"—a force produced by negative pressure within the abdomen. This force is similar to that of inspiration in thoracic action. It is called an adspiratory force, a sudden and great increase of the retentive power of the abdomen. Of the action of this force I can give you examples in the impregnation of women under extraordinary circumstances. This explanation of such impregnation is of old date, although it is only now that it has been made the subject of careful scrutiny and experiment. A woman may be impregnated without penetration. Of this a good indisputable instance is known in the famous case where a woman conceived whose vagina was only so big as to admit a goose-quill. Many cases of alleged impregnation without penetration are open to dispute, but I shall narrate one which is not open to doubt. A woman was operated on in Dublin for vesico-vaginal fistula, the operation being intended to produce entire closure of the vagina. It succeeded very well, and the woman's condition was much improved by it. The urine collected in large quantity in the cloaca formed by the bladder and vagina, and she passed it chiefly by the urethra. She noticed that, when she menstruated, in addition to urine, some bloody fluid came through a small opening on the anterior margin of the anus, through which a surgical probe could be passed. The urethra was of natural dimensions. Her husband, who was a soldier, came home after a long absence, and she fell in the family way. I delivered this woman of a living child at the full

time, and had thus opportunity of examining her carefully a second time. It was necessary to lay open freely the united parts to allow the child to come out, which it eventually did. Of course she might have become impregnated through the urethra, but she said she became so through the little aperture; and as there could be no penetration through the urethra, for our present purpose the demonstration is the same. This is an example of strong adspiratory force, and it will not furnish us with an explanation of retention because it is not constant in its action.

The opposite of this, the second force, is strong expulsion —an action exemplified when a man forces a hernia into the inguinal canal; a force familiarly known in delivery, in defæcation, and in urination. These three last are instances of this expulsion, concerning which I must say a few words. There are two forces which take part in producing expulsion. First, the contraction of the organ which is to be evacuated, and second, the general abdominal expulsive force, commonly called "bearing down."

In the case of "adspiration" there is only one force: in the case of expulsion there are two: and it becomes necessary to consider the respective parts the two forces take in the three functions.

In the case of parturition the body to be expelled is nearly solid, and only to a slight extent of a viscous character. In accordance with this, you have the expulsion resisted or stopped by a stricture or by even a slight contraction in any part of the passage. Further, you have the expulsion chiefly brought about by the organ itself, by the contractions of the uterus in "pains"—the "bearing-down" coming in merely as an adjuvant.

Let us now consider defæcation. Here the body to be expelled is normally viscous, and here also you have the influence of an obstruction by stricture well seen. But this will have no effect if the stools are fluid. Its influence is

limited to the case of stools more or less approaching solidity. In the case, then, of the rectum, you have some degree of contrast with the uterus. The uterus can squeeze itself so tightly together as to close its cavity completely, and evacuate itself not only of the ovum, but also of the last drop of fluid contained in it. The contractions of the rectum are comparatively slight, and I know of none so tight as even to embrace the finger. The rectum, then, is an organ emptied partly by its own contractions, but chiefly by the bearing down or expulsive abdominal effort; positive pressure in the abdomen being, in ordinary defæcation, temporarily produced or increased to press out the contents.

If you consider the bladder, you have an organ expelling not a body nearly solid, not a mass of considerable viscosity, but a fluid; and in accordance with this you will find that the influence of strictural obstruction—such as is so efficient in parturition and defæcation, producing retention—is unknown. In the case of the bladder it is commonly stated—and you will find it in the most recent text-books—that the urine is evacuated by contraction, and it is implied that this is the case until the end of the discharge; but I think this is erroneous. It is mainly by bearing-down that the urine is evacuated. There is an inhibitory action upon the neck of the bladder, whose contraction has to be overcome, but when this part of the passage is made permeable, the bladder is emptied chiefly in consequence of abdominal pressure. You do not feel the bladder contracted if you examine a woman after urination. In the whole of my experience I remember only twice feeling the bladder contracted, and like a small tumour, about the size of a hen's egg, between the uterus and symphysis pubis. Again, if you ask a woman to urinate before an examination (as it is sometimes necessary to do), and measure the organ by a sound both before and after the emptying, you will find it nearly as long after as before evacuation. If the bladder contracted so as to be felt by

the examining finger, per vaginam, as a small softish tumour, then you would either not get your sound introduced, or you would find it enter only about three inches instead of five, which is the ordinary measure of a healthy bladder, counting from the urethral orifice. The cubic capacity of the bladder is destroyed by evacuation, but not its dimension as measured by the sound. And this demonstrates that the muscular contractions of the bladder are not so important a force in urination as is the bearing-down abdominal force.

The adspiratory and expulsive forces, when temporary and powerful, do not explain the retentions of mucus of which I am speaking to-day; we must have a gentle and constantly acting adspiratory or retentive force. Mucus is retained when there is this condition; and this is exemplified in a variety of circumstances. You may have a pessary causing large vacant spaces which become filled up by mucus, which not rarely becomes fœtid. Sometimes fibroids projecting leave an interspace which becomes filled with uterine mucus.

In the case of the uterus, you might suppose it would require a greater force to expand it than can be afforded by retained mucus; but everything we know tends to show that only a minute force is required to do this. The growth of the ovum in the uterus can exert only a slight force, and the uterus is during pregnancy not tightly replete. Experiments can also be made upon the internal orifice of the neck of the womb, which is the hardest portion of the organ to dilate, and they show that the force required for this purpose is so small as to be measured with difficulty, if such force acts slowly and continuously. Much, however, has to be done to enable us to understand how this constantly acting force is produced and operates. I shall at present limit myself to giving statements to show that it has a real and clinically important existence.

In one of the cases of hæmatometra, a collection of blood in the uterus, which I have punctured by a large cannula,

nothing flowed. I thought at first that my diagnosis must be wrong. The same happens sometimes in the case of the bladder of urine; you put in a catheter, and nothing comes until you apply pressure above the pubes. In this case of hæmatometra, when pressure was applied, the blood flowed, and my diagnosis was confirmed. There was, of course, some force retaining the blood. Again, a lady, had ulceration of the interior of the body of the uterus, which was not flexed or verted: this uterus expanded so as to be large enough to contain the fist; the neck was widely open, and instruments as large as a finger were introduced into it. The uterus remained full; only the overflow escaped. In another lecture I mentioned a case in which the cervical mucus was found filling the cavity of the body of the uterus. In that woman the cervical mucus, instead of flowing into the vagina, flowed up into the uterus, distending it. Her uterus was filled with healthy glassy mucus, the tag of which was connected with that in the cervix.

Collections of mucus in the cervix are not rare, and in the great majority you have the os uteri patulous. Lately it has been alleged that stricture of the external os leads to the collection of one or two drachms of mucus in the cervical cavity, and this is described as a disease dependent upon the stricture. I have seen very many cases of dilated cervix replete with viscid mucus, where the external os uteri was widely open. Cases of minute external os uteri, stricture of the external os, are uncommon; you will not see more than a few in a life of special practice. In every such case that I have examined there has been no unnatural amount of mucus in the cavity of the cervix. Under these circumstances there can be no difficulty in arriving at the conclusion that stricture of the os has very little or nothing to do with dilatation of the uterus by cervical mucus.

A case occurred some time ago in "Martha" where the os externum was in the state of extreme stricture. It was

remarkable because the woman had borne a child. In that case there was no retention of mucus in the cavity, and there was no dysmenorrhœa. The case is worthy of attention on other grounds, for it was a sad and terrible example of fatal accidents which sometimes occur in practice. A very small wound, opening the external os, led to this woman's death from peritonitis. The death is perhaps partially explained by the existence of old syphilitic disease, made certain by the condition of her liver, and by other observations. This misfortune, however, gave us the opportunity of examining this woman's uterus after death, and we found the state of cervix that had been diagnosed.

M. M., aged thirty, married for thirteen years, had a miscarriage thirteen years ago, and a child twelve years ago. Catamenia began at fourteen, and have been regular till a year ago. During the last year the periods were delayed, the interval being sometimes seven weeks. The periods last only for one day, and there is no dysmenorrhœa. Cannot long retain urine, having to get out of bed several times in the night. Urine 1,024, neutral; contains phosphates; no sugar nor albumen. Complains of sudden intermittent pain in the side, and of a white discharge from the vagina. Examination of vagina discovers nothing abnormal except a longitudinal cicatrix near the cervix uteri on the left side. The os uteri can neither be seen nor felt; but a reddish spot and a minute tag of mucus mark the spot where it is. The smallest probe at hand cannot be introduced, but subsequently a probe of the size of No. $\frac{1}{2}$ catheter is passed. While it is in the os, two small nicks are made in the margin of the cervix, and a common uterine probe is now easily passed, and discovers only normal conditions of the cervix and body of the uterus. A bougie was passed daily through the external os for two days, and on the third day a uterine sound was passed into the cavity of the body of the uterus. On this day she showed symptoms

of peritonitis, and died after five days' illness. At the post-mortem examination, twenty-three hours after death, the peritoneum was found everywhere covered by soft lymph. The liver had several depressed scars, dipping into its substance. The spleen large and soft. The right broad ligament contained a small abscess with about half an ounce of pus. The uterus normal. A little excoriation of the cervix, and a little pus around the cervix. External os would admit a uterine probe.

Now I come to the vagina. The secretions of the vagina are generally absorbed. In what we may term a perfectly healthy natural woman there is no discharge. Secretions in more than usual quantity, whether healthy or morbid, generally flow from the vagina; but not always, for it may be full of the secretion, normal or morbid, inspissated or otherwise altered in character by age.

As an example of unnatural retention in the vagina, I may tell you of a case which occurred in an elderly woman who came to me not long ago, complaining of a fœtid discharge from the vagina. A fœtid and loosely felted coherent ring of hairs was found around the neck of the uterus. In this case you see that even foreign bodies had no tendency to pass out. In women of any age you may have fluid retained. Menstrual fluid is sometimes retained, and sometimes becomes putrid.

Copious secretions into the vagina generally soon pass out of it. In some women this tendency is so great, that, if there be only slight increase, they feel moisture on the labia, and are made anxious. Such slight increase is in many women produced by much standing or prolonged walking.

In the great majority of women the semen is retained; but in some, and even in some fertile women, there is profluvium seminis—that is, semen is discharged while they are lying, or as soon as they get out of bed. This is a case in which the gentle adspiratory force is not in natural action.

In "Martha," any day, you may see cases of vaginal secre-

tion retained. It is most common in the old, and in them the retained secretion sometimes gives rise to a slight degree of vaginitis; but in most, such accumulated secretions are expelled in defæcation. The healthy "whites," when retained long, become granular and lose their pure colour, becoming of a dirty hue.

A great deal of bad practice is pursued in using vaginal lotions when such are not required. In cases of healthy "whites," milky in character, you may use a mild vaginal lotion to strengthen the passage, but you should do so with reluctance. The best treatment is to use constitutional strengthening remedies, not lotions. It is where discharges do not take place that you find most advantage from lotions, as in cases of retained secretions.

When you require vaginal lotions for cleanliness, the best instrument to use is a Higginson's syringe with a proper female piece. The quantity of injection should be about half a pint. It may be simple tepid water, or with some antiseptic added to make it more thorough.

The retention of mucus in the cervix is generally connected with a catarrhal condition of the part. I have never seen a case, as I have told you before, in which it was necessary to make incisions for a real or supposed stricture to let out the mucus. What is wanted is to cure the catarrh —a proceeding which I have gone over with you in a former lecture, and which you may see at any time practised in "Martha."

Retention in the body of the uterus itself is a more difficult matter. The mucus of this part is a thin, clear, slightly viscid fluid; but when it accumulates it is almost certain to become turbid; and in some cases it does accumulate without disease of the walls of the organ. Such accumulations are mostly seen, not in simple flexion of the womb or in cases of dysmenorrhœa, but in chronic inflammatory conditions of the body of the uterus or of its lining membrane.

LECTURE IX.

ON RETENTION OF BLOOD.

I USE the term "retention of blood" in preference to the term "retention of menses," because in every case blood is certainly retained, whereas in no case is it absolutely certain that the retained blood is menstrual;—it may be retention of menses; it certainly is retention of blood. The circumstances which show that, in any particular case, it is retention of menses, and not of mere blood, I do not propose to enter upon here, because to do so would throw no light upon the subject of the present lecture.

A great and well-known cause of retention of blood in the genital passages of women is atresia. Such retentions get the names of hæmatocolpos when blood is retained in the vagina, hæmatometra when it is retained in the womb, and hæmatosalpinx when it is retained in the tube. But it would be a great mistake to suppose that blood is retained in the genital passages of women only when there is atresia.

Before advancing further, I may just state that there are many diseases of women in which there is retention of blood. In hæmatocele you have retention of blood within the peritoneal cavity; in that disease, indeed, the blood frequently regurgitates from the tube or uterus into the peritoneal cavity, to be retained there. In hæmatoma, or thrombus, in the perimetric or circumvaginal cellular tissue, you have retention of blood. Ovarian apoplexy is not a

rare disease. Bleeding into an ovarian cyst is not uncommon; and sometimes the bleeding is dangerous from its profuseness, sometimes from the ovary bursting.

These are not such retentions as I propose to speak of to-day, and I dismiss in a few words retention of blood in the Fallopian tube or tubes, for this is a subject of which practically or clinically little is known. I spoke of retention of mucus or muco-pus in these tubes in my last lecture.

I shall also say very few words about retention of blood in the vagina. This occasionally happens in ordinary menstruation, especially if it is more copious than usual. The blood lodges in the vagina, coagulates; and clots are expelled during menstruation or after it. The clots may be bright and fresh, or partially changed in colour into dull or dirty brown. It is not, indeed, a very rare thing for menstruating women who retain blood in this way to have fœtid menstrual discharges, fluid blood or clots being not only retained in the vagina, but decomposing and stinking, and coming away with a fœtor which is always and justly not only very disgusting, but also alarming, in consequence of the frequency of fœtor in very dangerous diseases of women.

With these preliminary remarks I come to the first great subject of the lecture—retentions of blood after and in connection with a recently passed pregnancy, before the womb has regained its unimpregnated condition; and you know that in most women this does not take place until about six weeks have elapsed from the child-birth or abortion.

After I have described these puerperal retentions, I shall describe cases of retention of blood in the virgin womb, or in the organ apart from any connection with pregnancy.

I begin with the retentions in the puerperal state. Such may take place, first, in a womb which is still large. The retention of lochia is an extremely important subject, which

I shall say nothing about here. In addition to retention of blood in a womb that is still large, you may, secondly, have retention of blood in a womb which is rapidly increased in capacity, as if for the purpose of containing and retaining the blood.

This dilatation of the womb happens with frequency or facility in proportion to the nearness to the birth, whether of a child at full term or of an abortion. In all cases of retention of blood in the womb it is possible that the womb may expand, but it is especially liable to occur in women who have recently been delivered. Again, this dilatation of the womb is dangerous in proportion to the advancement of the previous pregnancy. It is not nearly so dangerous in a woman who has an abortion as in one who has recently borne a full-grown fœtus.

Now, this dilatation of the womb is familiar to you all and to every practitioner as a common occurrence in post-partum hæmorrhage. Then, the womb not only gets full of blood, but expands, so as to hold a large, and, it may be, even a fatal quantity of blood. But when you have such puerperal retentions as I am now discussing you may have a womb expanding, not immediately after delivery, but at a late period after delivery, and before the six weeks of the puerperal state have passed.

Clots often form in the enlarged uterus; and, when this happens, you are generally told that there is a copious watery discharge; clot remains, but the serum of the blood flows out blood-tinted and in the form of a copious watery discharge, to which the nurse or the patient herself may direct your attention.

From a uterus containing a clot you may have further hæmorrhage without displacement of the old clot, the new hæmorrhage flowing round the clot and passing into the vagina, and so forth from the woman's body. Not very long ago I saw a case of this kind, where the clot was

retained almost certainly from the time of delivery until three weeks after the birth. Then the woman had a flooding, and after the flooding had proceeded alarmingly for some time before my arrival, there came away, partly in consequence of the treatment, a clot of the shape of the distended uterus, and which proved the condition that I am describing by having on its surface partial decolorization, a mottled surface, showing that the clot was an old clot which had lain in the uterus almost certainly since the time of the woman's confinement.

When a woman is not perfectly or completely delivered, but has a little bit of placenta or pendulous decidua left attached to or hanging in the womb, then you have arrest of the diminution of the bulk of the womb, and clots are formed in it, generally soft clots, rarely becoming old and decolorized, such as I have mentioned above, but soft clots which are discharged now and again.

Of this condition I have, in a former lecture, given you remarkable examples. To-day I shall give you another; and before I read it I shall say a few words about the polarity of the uterus.

"Polarity" is a name long ago given to certain functions of the uterus, which I shall describe very briefly, because the case is one which illustrates the subject. The same polarity is illustrated in the function of the bladder, and less distinctly in the function of the rectum—that is, in urination and defæcation.

What is polarity of the uterus? It implies an opposite state, as to activity or the reverse, of its two ends; of the lower part of the uterus on the one hand, and of the fundus and upper parts of the uterus on the other—inhibition, as it is now-a-days called, at one part, while there is action at the other. And there may be change from inhibition at one part to action in the same, and from action at the other part to inhibition in the same—that is, the reversal of the condi-

tion in each of the two parts. These two conditions are co-ordinated to one another both in health and in disease; and the study of this polarity explains a good many things which I wish I had more time to enter upon.

Consider pregnancy. In this state the lower segment of the uterine body keeps continually contracted until the end; but the fundus and body of the uterus are in the state called inhibition; they are expanding, not expulsively acting. When the time of delivery comes, you have the reversal of these conditions: the lower segment of the uterus is in the state of inhibition, while the fundus and body are expulsively operating. These are illustrations of polarity in health; and in disorder of labour, also, it is frequently illustrated. Such a case as this often happens: a woman has a slow labour with a healthy cervix, but the cervix is not dilating; the lower segment will not open. In some such cases—and it is very difficult to diagnose which are the cases fitted for the plan of treatment—you let off the waters. Immediately, the fundus and body of the uterus, being partially evacuated, and consequently much contracted, begin to work vigorously; and in co-ordination with that working by uterine pains the lower part of the body and neck of the womb are inhibited and open almost suddenly. Another disorder, not very rare, I shall mention, for it is a very perfect illustration of this polarity: the disorder known as hour-glass contraction. This is a case in which you have action of the cervix or lower part of the uterus, while you have inhibition of the upper part; and if you could reverse the conditions the case would be cured. Such a case is generally called hour-glass contraction, but that is only one-half of the disease; it is quite as truly hour-glass expansion, for the contracted part is not the only diseased part: the inactive part above the contraction is quite as much in a morbid condition of inhibition as the contracted part is in a morbid condition of action.

I shall now read you the notes of the case :—

M. C., aged forty; married thirteen years; has had six children, the last being born three years ago; had a miscarriage a fortnight before her admission to "Martha." Catamenia began when she was twenty years of age, and have been regular, lasting seven days. Was in good health till the miscarriage which she thinks was caused by fright, and occurred in the fourteenth week of pregnancy. She was told by her medical attendant that everything had come away. From the miscarriage, for ten days, she had great pain in the hypogastrium, and continuously lost blood, which was sometimes discharged in clots. Then for two days she lost no blood, but had a profuse watery discharge. After this the loss of blood recommenced. On admission the cervix is open so as to be just permeable by the finger, which discovers nothing near the internal os. The uterus is bulky, the probe entering easily four inches; it is retroverted and retroflected, but easily replaced. She is extremely anæmic. Pulse 130; temperature 98°. Half-drachm doses of the liquid extract of ergot to be given thrice daily. At the visit two days after admission the bleeding and discharge of clots is still great. The cervix uteri is now widely open, so that two fingers may pass easily. Nothing is found in or near the cervix. The uterus is less bulky, and can be felt to contract during examination. As high as the finger can be pushed a fleshy substance can be felt. It is found to be an indurated placental mass, firmly adherent to the uterus, and is removed piecemeal by forceps. An hour afterwards she had a severe rigor with temperature 104·2°; but this passed off, and now for several days she has been very well, the bleeding being arrested.

Note the conditions here. At first the cervix was permeable only by one finger, and nothing could be felt as high as it could reach in the cavity of the body of the uterus. Ergot was now given; it brought on active contractions, which could

be felt when the woman was examined. This action of the uterus drove nothing into the cervix to dilate it; but it dilated spontaneously, so that after two days of ergot two fingers could be easily passed up into the uterus to remove a firmly adherent placental fragment, the extraction of which by forceps led to the hæmostasis and progressive recovery of the patient.

A disease closely connected with such cases as I have just mentioned is fibrinous polypus. This is a retention of blood, —of a clot of blood which becomes indurated and externally decolorized, which retains connection with adherent shreds of placenta, which has all the symptoms of a polypus, and which lies with its stalk in the body of the uterus, and the body of the polypus generally in the cervix. This mass of retained and adherent blood-clot becomes more and more decolorized externally so as to have a tough fibrinous exterior, and hence its name. It is treated as a polypus is treated.

The best example of retention in connection with pregnancy is seen in the most characteristic cases of secondary hæmorrhage. To illustrate this I shall mention a case which occurred not many years ago in my own practice. A woman was delivered in natural labour at the full term. Her uterus was found to decrease naturally until nine days after labour. Then she had sudden copious hæmorrhage. This was secondary hæmorrhage, not from a retained bit of placenta nor of membranes. The copious flooding was only partially external, for the uterus became rapidly dilated to be at least the size of a four-months' pregnancy, and was filled with soft clot. The woman was in danger from the hæmorrhage, though there was not much externally, for it was mainly retained. The case was treated just as hæmorrhage would be after delivery; the womb was made to contract, and to maintain the contraction. When emptied of clot it was of the size of a healthy uterus about nine days after delivery in the healthy puerperal state.

I now come to consider cases of retention of blood in the virgin uterus, or in the uterus uninfluenced by recent pregnancy.

Some women have slight discharge of menses, and only pass the blood when they are standing. The flow stops when they lie down. This is explained or explicable in two ways: the blood pressure, increased by standing, may cause the flow only when the woman is out of bed; but in many women there can be no doubt that the blood does flow in small quantity, and is retained in the womb, and passes out of it on standing.

It is a common thing for women and practitioners to be deluded into supposing that a woman has prolonged menstruation by the circumstance that many women, after menstruating, retain a little blood in the womb, which comes away brownish for days after real menstruation has finished: and there may be an interval of days between the end of menstruation and the commencement of the brown flow. These days of brownish discharge are not days of menstrual flow, but days of the flow of dissolving, retained, and altered blood. There is the closest analogy between this and blood-tinting of the lochia after delivery by the dissolution of the clots retained in the mouths of the uterine sinuses.

Women in healthy, although not in ordinary menstruation, sometimes pass clots, and the slight pain with which they pass them, and other evidence, prove that these clots had been retained in the uterus and discharged by uterine contraction and opening of the cervix. Such clots are small.

But there is a rare condition of the discharge of menstrual clots which is important, because you may be misled as to the virtue of a female if you do not know what I am to tell you. This is best illustrated by a case which occurred in my own practice very long ago, and in which, being ignorant of the occasional retention of menstrual clots till they are partially decolorized, I had great difficulty in

believing that the woman was a virgin, as she asserted. She was a virgin, and there could be no doubt that the clot which she discharged was menstrual. It was of the shape and size of the uterine cavity, and was decolorized upon the surface just as a fibrinous polypus is, but not so thoroughly or deeply. The size of these clots is very small, the cavity of the unimpregnated uterus being in cubic capacity about, or rather under, half an inch cube. The clot contained in the uterus, as in this case, may expand the uterus without stretching its walls, for you must remember that there is a great difference between the capacity of an ordinary empty uterus (the cavity being then mainly a potential one) and the capacity of a uterus which is expanded—all the difference between a collapsed empty bladder and the same when full. You must not judge, then, from the condition of a healthy unimpregnated uterus, how big a clot it may contain when expanded. An empty bladder contains nothing; but the same expanded, without any alteration except in position of its walls, may hold half a pint. So with the virgin uterus.

Whether the uterine cavity expands and dilates in the unimpregnated state so as to contain and retain a large clot I cannot say. I know of no case of the virgin uterus expanding so as to contain and retain a large clot, say as big as a hen's egg. I do know of cases in which it has expanded so as to contain a large soft clot, but in these cases the cervix was expanded as well, and the clots were not retained for any length of time, were not hard nor decolorized. The women were flooding.

Retention of clots is a common thing in cases of cancer of the body of the uterus or of fibroids; and the blood is expelled in the form of clots, or comes away dissolved as brownish discharge.

I have said that the unimpregnated healthy uterus is not known to expand so as to contain and retain a large clot; and the last thing that I have to say, in regard to these

various conditions is, that the diseased uterus not only has its cavity expanded in some cases of cancer and of large fibroids, but it is almost certain that it may be expanded when a little polypus is growing upon its internal surface, so as to have a large cavity sufficient in capacity to contain many polypi as big as that one which leads to the dilatation of its cavity. Of this we had a good example in "Martha" a few weeks ago, in a woman whose case presented dangerous conditions, whose pathology was inexplicable, and who died apparently of disease of the stomach. She had a constant brownish discharge from her uterus. On dissecting this woman, there was found adherent, near the fundus, a small mucous polypus about the size of a hazel-nut. This woman had had a large family, but had not been recently pregnant. Her uterus had a large cavity, and measured internally four inches and a half from the external os to the fundus. Here there was a distended or dilated cavity filled with blood, which came away in clots, as pure blood, and as brownish discharge; there being always a large quantity retained in the dilated unimpregnated uterus, the dilatation being probably caused by the growth of a small polypus near its fundus.

All these cases are treated on the same principles. You have in ergot of rye a powerful agent, not for inducing pains, but for inducing continuous, or tonic, or permanent contraction—in other words, retraction of the uterus. Ergot of rye, then, in all these cases is an invaluable remedy, from this power which it has over unstriped muscular fibre.

To produce temporary contractions you may resort with advantage, in various circumstances, to the use of cold, suddenly applied, and for a short time. You may also use heat, for heat has the same power of stimulating uterine contractions as cold has; indeed, sometimes heat applied externally or applied in the form of a hot vaginal lotion (105°) seems to be more powerful than cold similarly applied.

In these cases of retention this is all the treatment—at least, it is the chief part of it. But you have often not only to produce evacuation of morbidly retained blood, but to stop hæmorrhage.

Now, in order to stop hæmorrhage, you have, in addition to ergot and heat and cold, two great remedies, the rules for the application of which I have no time to discuss to-day, but which I shall mention only. One is the powerful mechanical remedy of a plug, restraining the flow of blood by counter-pressure, the plug being placed in the vagina or cervix uteri, or both. Then you have another set of remedies called styptics, which really act also mechanically by clotting the blood or by corrugating and hardening the bleeding surface. These remedies—the plug and styptics—are not remedies for retention, but for bleeding, and I shall only say that our experience of the best styptic, the perchloride of iron, is sufficient to show that you must be very cautious in its use, and not only in the use of it, but of any other styptic, for even in the unimpregnated uterus the styptic may pass into the uterine veins in the broad ligament, and produce changes there—tanning the parts—which would be fatal if the woman survived. Tanning is therefore seen only in cases which have proved fatal from some other cause; and in one case which occurred in "Martha" lately, death was produced by embolism. The styptic had clotted the blood, and the clots had passed into the woman's lungs. You must be cautious, and at present I employ not any iron styptic, but tincture of iodine.

LECTURE X.

ON RETENTION OF URINE.

We distinguish retention of urine from suppression—Ischuria renalis. To speak generally, in the former the urine is secreted but not discharged; in the latter the urine is not secreted and there is none to discharge. But that is not a complete definition, for the two diseases have close alliance: not in their nature or in their treatment so much as in their symptoms and morbid results. If retention of urine is absolute—as, for instance, by obstruction of both ureters—then there is besides retention also suppression of urine, for urine is not secreted. Further, retention of urine often produces dilatation of the ureters and of the kidneys, a condition in which the sufferer is liable to sudden suppression of urine, with all its dangerous, alarming, or fatal results.

To one well-known set of cases of retention of urine I will now only refer. In them, one kidney has had its function somehow or other destroyed, and then retention of urine is produced in the other kidney by the progress of a calculus into the ureter. As a consequence the patient is suddenly plunged into the greatest danger. Many cases of this kind are recorded.

Retention of urine is a grave disease well deserving its place in the nosology, although it is not primarily the disease in any case; the cause of the retention being, theoretically at least, a better source of nomenclature than the retention, which is a result of a great variety of distinct causes.

Before proceeding further I may tell you that retention of urine in the fœtus is a very different thing from retention after birth. The fœtus, indeed, may be well nourished, born alive, and—as in a case under my own care—live for two days, with absence of urinary organs—without kidneys or bladder! In the fœtus it occasionally happens that atresia of the urethra produces retention, which has probably lasted during the whole fœtal life, producing enormous distention of the bladder, sometimes mistaken for ascites. In such a case there is not a fatal result to the fœtus, which would certainly occur were the same condition produced after birth. In some of these cases of distended bladder there has been found absence of communication between the bladder and the kidneys. But I must stop these curious details, which have only a remote bearing on the matter before us, and dismiss the subject by saying that the difference between the fœtus and the condition after birth lies in the circumstance that urea, or the excrementitial products of the kidneys, are probably not produced until the time of birth or immediately after it.

Retention of urine in a pouched urethra is sometimes called "urethrocele," and sometimes the pouch contains a calculus. These pouches it is generally impossible to account for, but they are evidently sometimes produced by arrest of a calculus in the canal.

Retention of urine may be in the bladder alone, or in the ureter or ureters alone, or in both bladder and ureters. Retention in the bladder leads to retention in the ureters. Retention in the ureters, has, on the other hand, nothing to do with the retention in the bladder. Retention in the bladder or in the ureters may be complete or incomplete. In the case of ordinary retention in the bladder, the incompleteness is very well illustrated in cases where the woman declares with truth that she is passing more urine in quantity and more frequently than usual. Although the patient

cannot say this of the discharge through the ureters when one or both of them is obstructed, yet we have reason to believe that in this case a similar incompleteness may occur. There is nothing more common in practice in this department of medicine, and therefore nothing more important for you to remember, than that the circumstances of frequency and copiousness of urination almost always, as in the first case I shall read to you, lead to the real condition of matters being for a time mistaken or overlooked. It seems difficult to opportunely recall to mind that retention of urine frequently occurs along with frequent and copious discharges of it.

The urine discharged in cases of retention is of low specific gravity, and if the retention is incomplete it is copious. Attempts have been made to explain these changes in the urine by increased pressure on the secreting surfaces. Uræmic eclampsia used to be, and in some quarters even now is, supposed to be accounted for by pressure on the kidneys and renal vessels. That is, I may remark in passing, an untenable view, but there is a great deal more reason in the mechanical explanation founded upon pressure on the secreting surfaces in the circumstances we are now considering. There are difficulties, however, in the matter, suggested by the consideration of the similar condition of the urine in hysteria where there is no obstruction, and in ureteral fistula, in which latter, however, the quantity is probably not increased. Of course, copious secretion only occurs when the pressure in front of the secreting surface is not so great as to stop it entirely. I know little or nothing of pressure being great enough to stop secretion in cases of retention in the bladder. Stoppage of the secretion is known to me only as a result of obstruction of the ureters, not of the urethra.

When there is incomplete ureteral retention, danger no doubt occurs; and it is illustrated in the fatal result pro-

duced by a uterine fibroid, which I shall presently read to you; but I do not know anything which helps us to decide when danger begins in a case of incomplete retention. We have, however, facts demonstrating the time of commencement of danger after complete ureteral obstruction. For instance, recently, several cases have been recorded of the ligature of both ureters in the operation of excising the uterus; and these cases, although surviving for several days, have died without showing any special uræmic symptoms. Cases of other kinds show that the ischuria of complete retention, as by ureteral obstruction, may be like cases of simple ischuria or primary suppression, in having uræmic symptoms delayed for a varying period, often of about a week.

What are the symptoms when they come? I shall read presently cases which will illustrate these, and it is very valuable to know them. The phenomena when they appear are very like the phenomena of uræmia in pregnancy, parturition, or the puerperal state, and of uræmic eclampsia: they are only like, but not identical. In uræmic eclampsia the outbreak of the alarming phenomena is generally much more sudden and violent. In ischuria from mechanical retention, the disease evidences itself by twitching of the limbs, a certain degree of stupor, a changed and unaccountable manner in the woman, and by contraction of the pupils. Often there is nothing more than this, and the woman gradually becomes weaker and dies; but sometimes, as in one of the cases I shall read to you, there are convulsions or eclampsia and complete coma before death.

I proceed now to describe to you the causes, and I shall consider all kinds of retention of urine because I am not interested in describing those cases of retention alone which at last result in complete obstruction to the discharge of urine, and in death.

Retention of urine in the bladder is generally caused by obstruction of the urethra. In a former lecture I described

to you a case of stricture of the urethra—congenital stricture—which caused retention of urine and dilatation of the bladder and of the urethra, for the stricture was at the external orifice. Cases of stricture from syphilis, and from urethritis complicating lupus, occasionally present themselves. Lately we have had in "Martha" a case of retention of urine from cancer. Cancer in any part of the genital organs is seldom a cause of retention of the urine. In the case which I refer to, and which some of you will remember, the cancer affected the orifice of the vagina and produced obstruction by pressure upon the urethra. An ovarian tumour very rarely produces retention of urine in the bladder. The retroversion of the gravid uterus is a cause of retention of urine, and you have seen examples of it in the wards. Upon this cause I shall say a few words. You will not understand the retroversion of the gravid uterus if you do not keep in mind that the retention of urine is both cause and effect—that there is, in this disease, what is sometimes called a vicious circle; and I shall have, in the course of this lecture, to point out to you several instances of this vicious circle. A pregnant woman has her uterus retroverted, and generally it gradually takes its right position as it grows. But if, for example, the woman has a contracted brim, the retroverted uterus will almost certainly not take its right position—it will not go up into the abdomen spontaneously, and it will come to produce retention of urine by pressure on the urethra. Again, if a woman with retroversion has retention of urine produced by any cause, then the case will become urgent, but only then. If retention of urine had not been caused by the retroversion you would probably never have heard of the retroversion; but the retention of urine has been caused, then the replete bladder pushes the uterus downwards more than ever, and keeps it down. The replete bladder, therefore, increases the retroversion, and makes it, for the time, at least, incurable, and it was the

retroversion that made the retention of urine by pressure on the urethra. So that you see the first is the cause of the second, and the second is, inversely, the cause of the first—both combining to form a vicious circle. In this kind of retention there is frequently, and probably always, a kind of insipid diabetes present.

The commonest case of retention of urine in the bladder is that of the second stage of labour. In the first stage of labour the uterus pulls up out of the pelvis the bladder, the lower part of the uterus, and the upper part of the vagina. All these organs are, as it were, taken out of the way to make room for the descent of the head. During the first stage of labour a woman urinates freely; but during the second stage, as the head comes down, it presses the urethra against the pubes. The urethra cannot be pulled out of the way, and the pressure on the urethra generally stops the flow during the second stage. In most women the second stage of labour is brief, occupying from one to three hours, and the retention of urine for that time causes no trouble. But the retention of urine even for that time sometimes leads to retention after delivery. If the second stage of labour lasts still longer the retention of urine becomes a matter of importance; but there is not time now to describe that.

A rare cause of retention of urine is extra-uterine pregnancy. We have a case in "Martha" now which is believed to be an extra-uterine pregnancy, and in which many of the statements I have made regarding retention of urine in the bladder are remarkably illustrated, especially the deception by the circumstance that the woman was passing a large quantity of water and urinating more frequently than usual. I will read you the particulars of the case:—

"I. W., aged thirty-seven, married, has had two miscarriages and two children. Her last pregnancy was with a child which went to term, fourteen years ago. Catamenia regular till four months ago. Then she began to have

bearing-down pains, and pain in defæcation and micturition. On July 3 she was admitted into "Martha" with perimetritis, and at this time she was very ill. There were tenderness and hardness around the uterus posteriorly. On July 31 she was dismissed much improved. But after her return home her pains returned, especially in the left iliac region, and she had much vomiting. On October 1 she was readmitted. She complains of pain in base of sacrum, and of labour-like pain in the region of the womb. Bowels constipated. Breasts enlarged, and containing milk. Lower half of abdomen is occupied by a prominent swelling, elastic, containing fluid, and rising to an inch above umbilicus, resembling a six-months-pregnant uterus. In both flanks there is resonance down to the spines of the ilia. The cervix uteri is to be felt behind the horizontal ramus of the right pubic bone, a soft tumour descends into the upper part of the pelvic cavity and fills it, being continuous with a tumour in the left iliac region. Catheter drew off two pints and three-quarters of limpid urine; specific gravity 1008; no albumen. The cyst-like swelling of the abdomen disappeared. The catheterism produced (and this is a rare thing) during its later period the pains of violent strangury. Most women are delighted with the sensations of relief; but in this woman there was, instead, violent strangury. She had for a fortnight pain and difficulty in urinating, requiring to compress the abdomen to aid herself. The urine has been in larger quantity and passed more frequently than usual with her. In subsequent reports it appears that catheterism continued, for a time, to be required.

Obstruction of the urethra is not the only cause of retention of urine in the bladder. Nervous disorder is a common cause, as is illustrated in cases of hysteria, cases of insanity, and cases of fever. A third set of causes is but little understood—the pressure relations of the abdomen, or too great retentive power in it: a condition in which, with or without

effort, no pressure sufficient to evacuate the bladder can be brought to bear upon it. This is illustrated in cases of retention of urine after delivery and in some others.

Lastly, there is a kind of retention of urine which I have not alluded to, where the bladder is, so to speak, badly constructed, as in procidentia uteri, so that instead of having the natural condition with the internal orifice of the urethra the lowest part of the bladder, you have a pouching of the bladder, so that the internal orifice is above part of the cavity and the bladder is not thoroughly emptied. For you must remember that it is not necessary for the emptying of the bladder that the organ should actively contract. In this condition of mal-construction, in which the internal orifice is not in its natural situation as the lowest part, so that the first secreted is also the first evacuated, urine is retained, and, if it decomposes, it is apt to cause inflammation of the bladder.

Now, I mention causes of retention in the ureter, and these have hitherto been very much neglected by practitioners. Pregnancy has long been known to occasionally cause obstruction of the ureters; but recently many observations show that this obstruction of the ureters has a good deal more to do with the nervous phenomena of pregnancy and even with uræmic eclampsia than we have hitherto supposed. This obstruction is most likely to affect the right ureter; and the reasons for this are, almost certainly, the two following: That the womb lies to the right side in about 75 per cent. of women—right lateral obliquity. If a pregnant woman lies on her back, the womb lies generally to the right side, and naturally presses more on the right ureter than on the left. If she stands, the uterus has still this right obliquity, and the pressure is probably very much the same —at least in primiparæ. But besides this, if you remember the anatomical position of the passage of the right ureter over the brim of the pelvis you will understand why it

should specially be liable to pressure, for there is, from the way in which the common iliac vessels pass down in front of the sacro-iliac synchondrosis, a great deal more prominence there than on the left side, and consequently the ureter is pushed forwards favourably for pressure on the right side, which it is not on the left.

Besides these there are numerous other causes. You have procidentia of the uterus sometimes producing apparently "a kink" upon the ureter—not compressing it, but producing a sharp bend in it which stops its canal; a kind of stoppage which is illustrated frequently in cases of ovariotomy, the bowel getting an adhesion which makes a sharp turn upon it, so acute that the alimentary mass cannot get along. Peritoneal bands have been found obstructing the ureter, and these may be produced in a late period of life; or they may, along with other causes of congenital deformity, have existed for a long time; and there is a great mystery about these cases as to why the symptoms did not come on until the patient had grown up, although the congenital deformity had certainly existed for a long period. Again you have, what I have described in a former lecture, inflammation in the cellular tissue round the ureters at the side of the womb, producing in some cases a condition that is called chronic *parametritis atrophicans*, and the atrophy leads to obstruction of the ureter. An ovarian tumour sometimes produces the same obstruction.

Before I read two cases of this kind—in one the obstruction was produced by cancer, and in the other it was produced by a fibroid—I will give you another example of the vicious circle. In cases of diabetes insipidus the ureters are often found dilated, as also the kidneys. This curious circumstance seems to be explained by some recent observations which almost prove that the disease known as wetting of the bed in children is the cause in some cases of dilatation of the ureter and of the kidney, and of danger

and even death. This wetting of the bed or frequent urination in children is far from being a complaint to be considered as altogether of trifling importance. In these cases retention in the ureter may occur, and it is explained by supposing that contraction of the bladder leads to the frequent urination, and also to closure of the vesical orifices of the ureters, produces dilatation of them, dilatation of the kidneys, and the danger of death. This theory will also apply to diabetes insipidus; and, if it is so, you have another example of the vicious circle. There is a large quantity of urine, which leads to frequent urination: frequent urination leads to obstruction of the ureters at their vesical orifices; and partial obstruction of the ureters leads to excessive secretion; the excessive secretion requires frequent emptying; the frequent emptying produces obstruction of the ureters; and the obstruction of the ureters leads to excessive secretion,—and so on. In congenital extroversion of the bladder the dilatation of the ureters may own the same cause.

I now come to two extremely interesting cases of obstruction of the ureter, the first of which was caused by cancer. In this case the symptoms of retention of urine were present before death, but they were masked by symptoms of acute peritonitis, which was the immediate cause of death; and it is not an uncommon cause in cases of cancer of the womb.

A. E., aged forty-one, admitted September 11, 1879. Married for twenty years; eight children, the last three years and a half ago; five miscarriages, the last seven years ago. Catamenia began at thirteen, and had been regular till about twelve months ago, when they became profuse and long-continued, leaving an interval of from seven to fourteen days. For a month had had pain in hypogastrium and thighs. Vomited her food generally. Bowels costive. Micturition had been painful. Had not passed water for three days, except half an ounce on the day of admission. Bladder

empty. Urine not discharged per vaginam; but there was a moderate amount of bloody discharge always going on. Temperature A.M. 97°, P.M. 98·4°. Upper third of vagina, cervix uteri, and neighbourhood were the seat of dense, irregular, nodose, fixed, hardness, evidently cancerous. On the 13th she had for fifteen minutes what was described as a fit of collapse with abdominal pain; the pulse 132 during the attack. Temperature, A.M. 98·4°, P.M. 99·2°. On the 14th, bladder examined in consequence of only four ounces of urine having been passed since admission. It was found empty, of natural size, not tender. Abdomen distended, tender, dull on percussion up to half-way between umbilicus and pubes. Especial complaint of pain in region of right kidney and ureter. Pulse 114, hard; temperature 101·2°. Twitchings began three days before death, in the feet, and gradually extended over the body and increased in severity, went on till 5 P.M., when she died. No marked contraction of pupils. During her stay in the hospital she had a manner indicating oppression approaching to stupor, which gradually increased. Post-mortem examination was reported as follows:—Body well nourished. No anasarca. Right pleural cavity contains some slightly turbid effusion with floating shreds of lymph, of which there is also some deposit on the lung. Right lung contains numerous small nodules of medullary cancer. Left pleura and lung normal. Heart and pericardium normal. All the viscera of the abdomen are coated with recent lymph, and the peritoneum is injected. Liver of normal size; contains several small nodules of soft cancer, and one as big as a walnut deep in the substance of the right lobe. Gall-bladder normal; spleen normal. Stomach and intestines normal internally. Mesenteric glands enlarged and soft. The upper part of the vagina and the cervix uteri are the seat of ulcerated medullary cancer. From the uterus there extends backwards and forwards a quantity of thickened dense tissue in which both ureters are

embedded, compressed, but not impervious. Ureters above this much dilated, especially the left. Kidneys pale, with thin cortex; surface smooth; capsule readily detached; no amyloid reaction. Left kidney enlarged, weighs nine ounces and a half; two pyramids ulcerated, but not cancerous. Right kidney weighs five ounces. Supra-renal capsules and bladder normal. Left ovary natural: right, as large as a walnut, and contains pus.

The next case, and the last one I shall read to you to-day, is one where death was caused by the very rare retention of urine produced by obstruction of both ureters by a fibrous tumour of the uterus.

A. S., aged forty; married eleven years; never pregnant. Had a large uterine fibroid projecting deeply into the pelvic brim and fitting it tightly. From this fibroid she had suffered in the usual way—pain, chiefly at monthly times, and occasional considerable hæmorrhagic losses. When she came into the hospital she had a new complaint of pain and tenderness in the belly, chiefly at the sides, and especially in the right flank, and the pain had shootings down the right thigh. Micturition painful; urine copious; specific gravity 1003; almost colourless; no albumen. When it became very desirable to have the quantity of urine measured, it was impossible to do so in consequence of its involuntary escape into the bed in great part. The abdomen at most prominent part measured thirty-two inches in circumference. The uterine cavity measured six inches and a half in length. A herpetic eruption with acute inflammation, covering the perinæum proper and the posterior parts of the labia majora, without considerable swelling, appeared a week before death and gradually faded. A fortnight before death she was seized with uncontrollable vomiting, which lasted for eight days. Then she began to have twitchings of all the body, which never ceased for many minutes. Twice she had regular convulsive seizures. Generally she was quite sensible,

but had a degree of stupor which increased as the end approached. The state of the pupils has not been noted in the record. *Inter alia,* the following statements are given in the autopsy:—Right kidney small, wasted; capsule comes off with ease, leaving surface smooth, pale, mottled with a few bloodvessels; cortex narrow, white; pyramids pink; ureter much dilated and tortuous, nearly as big as to admit a finger. Left kidney and ureter same as the right. The two weighed eleven ounces.

In retention in the bladder the organ becomes dilated. Sometimes the urethra becomes dilated. The bladder is slow in becoming irritated, but sometimes it becomes inflamed, and even gangrenous. Then, in retention in the bladder, the ureters become dilated, and the kidneys become injured and what is called dilated too. In cases of retention in the bladder it is always a very valuable sign to have the urine evacuated limpid or clear, for then you may be pretty sure that the bladder has not been much injured; but if, when you draw off the urine, you find that it is like porter, dark, grumous, mixed with a little blood, then you may be very sure that a serious injury of the structure of the bladder has taken place.

The indications of replete bladder everybody knows. You feel the enlarged organ as a cyst in which is generally, not fluctuation, but a feeling of fluid. The case is made quite clear by putting in a catheter and emptying it. Often there is no pain connected with this great dilatation of the bladder, and generally there is only pain at the early stages of the dilatation. This is well illustrated in the case of children who have been retaining their urine from fear. They have pain for a while, but soon the pain passes off, and the desire to make water, while the bladder is getting larger and larger. If the retention is further continued you may have micturition, and even frequent and copious micturition; then the retention is incomplete; and, lastly, you

have the uræmic symptoms which I have described to you.

In cases where the retention is in the ureter how are you to diagnose? It has been alleged that you can feel the dilated ureter. I have never been able to do so. I have repeatedly tried, and I remain doubtful if it ever can be felt—certainly never with any great degree of assurance. I advise you, however, in a case in which you suspect retention in the ureters, to pay a great deal of attention to pain in the flanks. Every case I have seen of the kind has complained of pain in the flanks and down the thighs; and these pains without uræmic symptoms, which may be at first absent or very slight, are, so far as I know, your only guides. There may, however, be also the low specific gravity of the urine, and perhaps polyuria.

Before I conclude I must say a few words in regard to the treatment in these various cases. The great thing is to remove the cause, and therefore I need say very little on most kinds of retention. A great rule in hysterical retentions is *not* to draw off the urine. If you once begin to do so you will have plenty of work supplied to you. I do not mean to say that in no case are you to draw off the urine, because the bladder may become so distended that, if you did not draw it off, you would do the woman serious injury; but after drawing it off, and after observing that the bladder has contracted, I recommend you to abstain from further assisting the woman. Of course you must be quite sure of your case—that it is an hysterical case: and here the importance of diagnosis is immense. It would be a dreadful thing to do a woman a serious injury through having mistaken her case for hysteria. The way of treating these cases was well illustrated in an example which I had not long ago in the hospital, of a woman who had been the torture of the physicians in the district from their being sent for at any hour of night or day to draw off urine. She was the *protégée* of all the

Ladies Bountiful in the neighbourhood, so that the doctors were afraid to treat her heroically. When she came into the hospital I said aloud in her presence what I did not quite mean—that although the bladder burst, the urine was not to be drawn off. It never was drawn off again. She made her water regularly after that, and went home cured, very much against her will. Repeated catheterism is sometimes required in cases of dilated bladder in consequence of its large size and imperfect action; and some cases of irritable bladder, from extreme size, are cured by repeated emptying by a catheter and allowing the bladder to contract.

There is a curious mystery about some cases. For, while the cause continues, you frequently have retention for only a short time. While the cause continues, and indeed in some cases appears to be getting greater, the power of evacuating the bladder returns, apparently quite capriciously. The great treatment, then, in cases of this kind is, as you see, to evacuate the bladder.

In cases of retention from obstruction of the ureter the removal of the cause will in future come to be a much more important matter than it has been hitherto, in consequence of the circumstance that the danger has not been recognized, or very seldom recognized; and the danger of obstruction of the ureter is very considerable. For instance, in a case of uterine fibroid producing nervous symptoms you can easily judge that the urgency of removing the cause may be very great. In the case I have read to you I do not think any operation would have been successful; yet, if we had fully appreciated the cause of the symptoms we should have been urged to an operation much more strongly than we actually were in that case.

LECTURE XI.

ON RETENTION OF FÆCES.

Incontinence of fæces, even when it is the result of mere physical disability, as in a case where a woman has got the perinæum and sphincter ani torn through in labour, is a disease of importance not only because the fæces pass involuntarily, but because this imperfection induces diarrhœa and depravation of the general health.

There are many kinds of retention of fæces, to which I shall not allude to-day, such as are produced by intussusception, by enteritis paralysing the bowel, by strangulation. In these cases, as you know, there is not only retention of fæces, but often also regurgitation of fæces, or reflux. The fæces in all of these diseases frequently come to be ejected by the mouth, implying a very long course of reflux. This reflux of fæces so as to come to be ejected by the mouth is not a characteristic phenomenon (far from it) of the kinds of retention of fæces that I propose to consider to-day, and which have been illustrated, almost all of them, in "Martha" recently. On the other hand, the whole of the fæces may be passed by the mouth, even for forty years, as in a case of anal atresia recorded by Bartholin.

Constipation is, essentially, slow progress of the fæculent mass from the cæcum on to the anus. Constipation, with slow progress, does not imply gradual and ever-increasing accumulation. Accumulation of fæces, of which I will give you a good example to-day, does imply retention, of course,

but there are many cases of retention of fæces without accumulation. When you have constipation with ever-increasing accumulation of fæces, the fæces become hard and dry. In many of these cases a natural cure comes every few days, or every few weeks, in the form of an attack of diarrhœa: the patient tells you that her bowels are always either very constipated or very loose—implying by looseness rather frequency of motions than thinness or liquidity of the stools. How long the fæces take to pass from cæcum to anus is a subject that I do not intend to enter upon to-day; but when they pass too slowly and accumulate, they may lie in any part of the great gut. The most frequent seat of accumulation is the rectum and sigmoid flexure; but you have cases of enormous accumulation taking place when the sigmoid flexure and the rectum are emptied regularly by cathartics or by enemata. In some rare cases of this kind, where, when the case comes to a happy termination, a potful of fæces is evacuated, you may, before the evacuation, feel the accumulation, as I have already said, in any part of the course of the colon. I have seen enormous masses of this kind, which were for a time suspected to be malignant masses, in the right flank; and the worst case I have ever seen presented the accumulation in the epigastric region; that is to say, before the crisis came of the evacuation of the bowel, an immense accumulation of fæces could be felt, forming a hard tumour in the region of the stomach. I shall now read to you a case illustrating a common form of accumulation which implies retention of fæces. It is a good example, but far worse cases are on record, and I have seen many worse cases. Indeed, cases are recorded—though I do not ask you to believe them implicitly, where a woman only defæcated four times a year, every three months. The case which I am about to read is in "Martha," on account of phlegmasia dolens of a peculiar kind. On palpating her belly we can perceive—and this a well-educated hand can

do in a great many instances—a peculiar pultaceous fulness of the abdomen, without resonance, or with very limited resonance. This condition led us to inquire into the state of this woman's bowels, and I will read you the particulars in this respect of her case.

L. B., aged thirty-three; married for nine years; seven children; no miscarriage. Last child born six weeks ago in an easy labour; has never been well since, and phlegmasia dolens of left leg began about a fortnight after delivery. Now her symptoms indicate the probable existence of abscess in the thigh, but locally no sign of it can be discovered in the swollen limb. During the first fortnight after confinement the bowels were opened once or twice, and for four weeks previous to admission they were not opened at all. Abdomen presents little tumefaction; no tympanites, but some resonance everywhere; has a doughy, pultaceous feeling. Castor oil and turpentine were administered four nights in succession, producing three or four large evacuations (not diarrhœa-like) daily. The first three evacuations were very large and hard, the rest more nearly liquid. The abdomen has become softer and more resonant on percussion, and the woman feels better. The leg remains much swollen from hip to foot.

That is an example of a very common disease—constipation with accumulation of retained fæces.

I come now to mention a kind of retention which is the very opposite of this: retention in the rectum of little bits of fæces. These little bits may not be scybala. The rectum, on examination, in cases of this kind, is found not to be a tube of moderate and nearly uniform dimensions, but a semi-paralysed tube, dilated and pouched, and probably subacutely inflamed or irritable. In this kind of rectum the bearing-down pressure does not empty the bowel completely, and little bits are left which may give rise to intense annoyance. A case of this irritation I saw a few days ago. This lady

came to me in Edinburgh twice, years ago, with the same affection, and, seeing her again on another matter, I asked how the rectum trouble was, and she told me that the diseased condition, which I am about to describe, remained exactly as before. Now, this woman, after the evacuation of the bowels, which she effects by an aloetic purgative, has to use, and always does use, an enema to wash out the pouched semi-paralysed bowel. If she does not use an enema, or if the enema does not succeed, she has irritation, far worse than tickling, which she cannot forget, and which prevents her from sleeping. I have said, "if the enema does not succeed;" and in her it generally does not succeed, and then she has to put in her finger and get hold of the very little bit or bits, and pull it or them out. Until she does this she can get no rest. This condition, although not alarming or dangerous to life, is extremely important on account of the annoyance it causes.

A semi-paralysed pouched rectum is in potential dimensions equal to the whole pelvis. It is necessarily an inactive rectum, and the fæces are often accumulated in it, and very difficult to get out. In such cases it frequently happens that no kind of purgative is efficient, and the bowel must be washed out by an enema. This washing out by an enema consists chiefly in dissolving the fæces and in filling the rectum with a fluid which carries away the broken-down fæces in its gush through the anus when the woman goes to stool. This enema does not produce contraction of the rectum, but it acts in the mechanical way I have described to you. In cases of this kind sometimes the enema does not succeed, and I have known several women—generally women exhausted by excessive child-bearing, who had long suffered from this condition—who had to dig out with their fingers the fæces from the rectum: not a little bit left, which irritated the rectum, but the mass of fæces, the whole stool.

There is a kind of this pouching which is peculiar to

women, and which requires a special description—it occurs in women who have vaginal rectocele. Now, this limited pouching, in cases of vaginal rectocele, is often a cause of extreme annoyance to a woman. The fæcal mass is projected into the pouch of the vaginal rectocele. It does not make the turn downwards as it ought to do, in order to emerge at the anus, but passes forwards, and with the rectocele pushes through the os vaginæ. If a woman has no disease but this vaginal rectocele she can be guided how to assist herself. Many women find out soon enough how to assist themselves. When the act of defæcation is going on they press firmly against the orifice of the vagina, and push back this pouch so as to restore the proper shape to the rectum, and then the fæces are evacuated naturally in other respects.

Retention of fæces is sometimes caused by congenital smallness of the anus. The only congenital case of this kind in an adult that I have seen presented a valve-like obstruction about half an inch within the external orifice. The woman had borne children, and how this, which was evidently congenital, had only at a late period of life come to be a formidable obstruction to the passage of fæces, causing retention, it is difficult to explain. I mentioned to you in a former lecture similar remarkable delays of the evil results of congenital urinary obstruction.

The most common cause of retention from smallness of the anus is a too thorough or an unfortunate operation for piles. Cases of this kind are not very rare where the anus gets too much closed, generally by the contraction of the cicatrix, so that the woman cannot effectually defæcate. In some cases the evil is temporary, and arises from spasm of the sphincter.

Now I come to another kind of retention which introduces the word scybalum. A scybalum is a rounded or oval mass of fæces, of larger or smaller dimensions, the size of a hazel-nut or of a hen's egg, or even larger, which has been long retained, become partly decolorized, hardened (especially

on its surface), and which is sometimes encrusted with salts of lime, producing a rough shell somewhat resembling that of a hen's egg. Such scybala may be found in any part of the great gut. They are not always the cause of retention of fæces. The further up the gut they occur, the more likely they are to meet with fæces which are fluid enough to pass easily by their sides, and then they do little harm. A case occurred in my practice, not long ago, of a woman dying slowly from malignant disease of the peritoneum. She was examined by myself and several physicians, who correctly diagnosed the disease, but incorrectly diagnosed two egg-like tumours which were for many months felt in the belly floating in the hydro-peritoneum which was one of the indications of her disease. These were supposed to be malignant masses. After death they were found to be scybala in the transverse colon, which were causing no irritation, and apparently giving the woman no trouble. The mistake, you see, was one of very little importance, but it is well to call attention to it, because under other circumstances the mistake might have been of the greatest importance. If we had depended on these scybala as evidence of malignant disease, we should have been misled.

When a scybalum is low down, especially if it is in the rectum, the fæces are very likely to be obstructed and retained. In this case you not only have retention *of* a scybalum, but you have a retention *by* a scybalum. Then the woman's only chance of having her bowels evacuated, if the scybalum persists, is in the motion being fluid and passing by the side of the scybalum. A scybalum in the rectum, obstructing the fæces in this way, is often called a scybalum acting like a ball-valve, but the fluid fæces do get past it. Semi-solid fæces are undoubtedly often obstructed by it; but it is only when the fæces are nearly solid that it produces ulterior consequences. It may permit passage of fluid fæces copiously, and yet be causing retention of the nearly solid fæces.

It is in this retention of fæces by a rectal scybalum that you have the best example of the disease that we are considering to-day. A woman having any form of retention of fæces may be truly described, in many cases, as being constantly purged; and in this way the practitioner is put off his guard. A woman having the greatest and most dangerous retention of fæces may be incessantly defæcating, and even in very fair quantity, and even nearly solid fæces, as one of my cases for this day demonstrates. You can see very strong analogy between this and the retention of urine in the bladder, which I was speaking of in my last lecture. In that disease a woman may pass urine frequently, and in large quantities; and yet there is retention. So it may be in the case of retention of fæces. In a case of retention of fæces by a scybalum in the rectum, the accumulation of fæces takes place first in the rectum, and it produces at last a tumour, which can be felt gradually forming in the left iliac region. This tumour presents generally little or even no resonance, is densely hard; and I have seen it repeatedly taken for malignant disease. I will describe to you the features of a case of this kind from the last example of it which came under my own observation. I was asked to go to the country, as a mere form, to see a lady who was dying from malignant disease of her rectum. She was described as being so far advanced in the disease that the malignant tumour could be felt in the left iliac region. Her torments with pain and tenesmus were agonizing. She was seldom off the chamber-pot, passing thin yellow fæces. This was simply a case of accumulated fæces by a scybalum in the rectum. With my fingers I dug out of her a very large potful of decolorized fæces of a disgusting odour—not the ordinary fæculent odour; and the tumour disappeared and the woman was cured. Now, you can easily understand how natural it was to fall into the mistake that I have described; and a case, which I shall presently read to you, will further impress on

you the danger of judging that there is no retention because a woman is defæcating, even frequently. This has a very important practical bearing not only on the diagnosis and treatment generally, but it has a very important practical bearing on the question of colotomy. You are not to suppose that colotomy is necessarily excluded from consideration because the fæces are passing. The retention of fæces may be going on to a dangerous and even fatal amount, although fæces are passing; and colotomy may be imperatively demanded.

I will illustrate this subject by several examples of retention of fæces. For instance, pregnancy leads in the early stages frequently to ordinary constipation, the sluggish action of bowels. But if you watch your cases of natural delivery you will frequently find in the extraordinary amount, and in the character of the evacuations, after a natural delivery, evidence that the advanced pregnancy had produced retention of fæces, even when the bowels were truly described as moving regularly. That is not at all an uncommon thing. We had a case of a rare condition in "Martha" war donly a few weeks ago, where a retroverted gravid uterus produced obstruction of the bowels with retention of fæces and without retention of urine. A fibrous tumour of the uterus, an ovarian tumour, both occasionally cause, by mechanical obstruction, very dangerous and sometimes fatal retention of fæces. Adhesions sometimes do the same. Another common cause of retention of fæces is stricture produced by simple inflammatory disease, or by lupus (and of this we had an example in "Martha" about a fortnight ago), or by cancer. The inflammatory disease is generally parametric and the contraction as high as the finger can reach. We have had a case where the coats of the bowel itself also were indurated, and for a time excited suspicion of cancer. Cancer of the rectum is the commonest cause of stricture. We have had several examples of this

in "Martha," and I shall read one of them to you:—A. G., aged thirty-three, has been married fourteen years and a half; one child thirteen years and a half ago; no miscarriage. During the last ten months has had almost constant blood-stained discharge from vagina, sometimes profuse and bloody. Complains of pain in lower belly, which is accompanied by desire to go to stool. This pain comes frequently, especially at night, when she has to get out of bed several times. After straining and passing a little fæces, the pain goes off. For three years has had a purulent, not bloody, discharge from the rectum. When she takes an aperient some pultaceous fæces are expelled, ribbon-like in shape, and smeared with muco-pus. Occasionally has had retention of urine, requiring the use of the catheter. The belly has a distinctly doughy, pultaceous, feeling, with some resonance everywhere, and no tympanitic sound. The cervix uteri is much enlarged; admits finger deeply, and is nearly filled by a hard nodule, all plainly cancerous. Vagina contains a thin fœtid discharge. The rectum admits the finger, but no more; and it can be passed for an inch through a tube which gradually gets narrower so as to prevent further progress. The most contracted part receives the tip of the finger. After staying twelve days in hospital she was discharged with a recommendation to return for colotomy.

This case was peculiarly interesting to us because the great symptom the woman complained of was griping pain seated in her sigmoid flexure—the pain of the bowel making violent efforts to evacuate itself, not tenesmus. We tried to relieve this woman in various ways, but failed. Colotomy was recommended to her, but she preferred to go out of the hospital, at least for a time. What became of her I do not know. She has not returned.

The next case that I shall read to you is a still more interesting one. In this case the bowel was ruptured probably in consequence of distension. The patient died of

peritonitis (as you will see) which lasted for two days. There was no stricture, but the obstruction was caused by cancerous degeneration of the wall of the dilated tube of the bowel for a great length. The cause of obstruction in this case was the same as is believed to be the cause of obstruction in enteritis. A considerable part of the bowel does not act; the fæces accumulate in it, and are only propelled slowly by the *vis à tergo*, or not propelled at all. In the case that I am about to read to you the fæces were propelled, but inefficiently and too slowly, and although the patient was, as you will observe, defæcating frequently, and, to the eye of an intelligent nurse, defæcating copiously, the fæces were retained in an extraordinary manner, and no doubt helped to produce the fatal result, at the time it occurred from peritonitis. Further, in this case the lump in the left hypogastric region was mainly a lump of fæces—that is to say, the bowel distended by hard fæces. It was correctly diagnosed as a case of malignant disease in the left pelvic and iliac region; but it was not ascertained, and I know no means by which it could have been ascertained, that the lump consisted chiefly of fæces. We suspected it, but we had no means of getting further:—

E. W., aged twenty-five, unmarried. Menses began at seventeen, and have been regular till two months ago, since which time they have not appeared. Four months ago began to have painful and difficult defæcation. This has gradually become worse, and for some weeks the pain of defæcation has been agonizing and followed by faintness. For a month walking has been difficult, and latterly almost impossible, from the hypogastric pain it produces. Micturition is accompanied by shooting pains. A fortnight before admission she felt a lump in the left iliac region, which has increased in size and become the seat of pain. Bowels act, not scantily, twice daily. Urine natural. Is losing flesh. The belly appears natural on inspection, but on palpa-

tion a rounded hard swelling is felt, rising from the whole length of left Poupart's ligament. It is dull on percussion, sensitive to touch, quite fixed, and reaches as high as half-way to the umbilicus. The tumour is felt to extend to the right, beyond the region of dulness, as far as the right pubic bone. The cervix uteri is on the right side of the pelvic excavation, and about an inch above the ischio-pubic ramus. It is indurated, and is in the midst of a dense sensitive hardness, which fixes it. Probe passes into uterus nearly in natural direction for two inches and a quarter. She was ordered to be well fed, and to have her pains assuaged by morphia. The bowels continued to act freely, twice, and sometimes oftener, daily; fæces hard, and dark in colour. On the fifteenth day after admission she became suddenly worse, with symptoms of peritonitis, including vomiting of fœtid green acid fluid in large quantity, and she died two days after this aggravation of her condition. The post-mortem examination, made twelve hours after death, is reported as follows:—Abdomen alone allowed to be opened. Peritoneal cavity contains fœtid gas, and a large amount of fœtid, brown, semi-purulent fluid. The great omentum adheres behind the whole length of left Poupart's ligament and to the subjacent bowels in the region. The small intestines, moderately distended with flatus, are red, adhere to one another, and are in parts covered with flaky lymph. The whole colon and rectum from cæcum to anus are distended by a hard, solid, continuous column of fæces, about the thickness of the forearm, greenish-black in colour, and of the consistence of putty, that is, nearly solid. There is no structural obstruction to the progress of the fæces. The pelvic organs and the superjacent intestines to the left cohere in one mass. Malignant growth occupies the mesentery, which is about half an inch thick; also the walls of the sigmoid flexure and rectum, which are thickened to a varying extent—about one-third of an inch in some places.

The bladder and uterus are not affected, so far as the eye unaided can judge. To the left of the uterus is a soft fibrous mass about the size of a small hen's-egg, being the left ovary containing a cyst filled with about a drachm of green pus. The right ovary cannot be discovered. The seat of rupture of the bowel cannot be made out, the intestines having given way in several places during the dissection.

You observe, then, that constipation is not a necessary symptom of retention of fæces; and that, although retention of fæces implies a certain kind of constipation, there may appear to be copious evacuations, while retention is going on.

Retention with accumulation is diagnosed by feeling scybala, or by feeling the bowel distended by a mass which takes impressions like dough. Sometimes the hardness is so great, and the pain produced by pressure so great, that this doughy character cannot be made out. When a woman suffers in this way from great retention of fæces, the belly is generally not tympanitic in any part. In the last case I read to you, the tympanites of the small intestines prevented us feeling the immense column of fæces which otherwise we should have made out. Often there is no tympanites, but simply the pultaceous condition of the abdomen, with slight resonance all over. Then, as in one of the cases I have read to you, there is sometimes intense griping, and if the rectum is irritated you may have tenesmus. In cases of this kind the whole body sometimes is infected by the fœtid mass. The countenance is dull, the face sallow, and you may smell the breath distinctly fæculent. The retention of fæces, however, seems, so far as I have observed, to produce no very grave symptoms except what are mechanical. Sometimes, but rarely, there is fæcal vomiting. I have read several accounts of grave symptoms produced by retention of fæces—even disorder of mind, and lately I read an account of delirium produced by constipation—but I can at present only express my very great doubts of the accuracy

of these observations. I think there was a failure to make out the distinction between a mere concurrence of phenomena and a consequence of phenomena.

The treatment of cases of this kind scarcely requires description. In common constipation you know the favourite purgatives are aloes and castor oil and turpentine, and such like. In cases of infarction of fæces, where you can reach the fæces you remove them, and you are recommended to remove them by a spoon or a lithotomist's scoop; but so far as my experience goes, this is a very useless instrument; and, although it may be disagreeable for the practitioner, I recommend him to use his fingers as infinitely more efficacious than any scoop or spoon-handle. When the mass of fæces is higher up, I have tried what is called massage—pressure, gentle kneading of the bowels, to try to produce action, and to produce a change of the shape of the fæculent mass—but I have not been able to assure myself that this treatment has done decided good. Enemata are of very great service. The most valuable in cases of this kind is that of turpentine.

Lastly, in some cases of this kind, such as cases of stricture of the rectum, which cannot be removed, or cases of paralysis of the rectum, by malignant infiltration, as in the last one I read to you, you must consider the advisability of resorting to colotomy. It has been done in obstruction by a fibroid. Colotomy is intended to allow the stool to pass before it reaches the disease which causes the retention; and in many cases it is perfectly successful. It allows the fæces to be passed through the loin in a manner causing great inconvenience to the patient, but in a manner that yet can truly be described as perfectly successful. Of course if the disease is malignant, or otherwise a fatal disease, you only get temporary relief; but that is a matter of very great moment. In the second case that I read to you the woman's sufferings were almost entirely dependent upon the griping

pains in the sigmoid flexure which came on before a little fæces came away. Surely it would have been very well worth while for the woman to have had colotomy performed, to relieve her of this great suffering which she had night and day, and to allow her to have the few months which she had to live passed in comparative peace.

The last thing that I will say about colotomy is this:— Passage of fæces, as it is not a sign that fæces are not retained, is also not a sign which excludes colotomy. Colotomy may be called for, as the cases I have read to you exemplify, even although there may appear to be pretty copious and regular evacuation of fæces. It may be too long delayed, the infarction being too great to be remedied by the operation.

Before concluding, let me merely mention an important and very disastrous set of cases in which there is extravasation of fæces as well as retention. I do not allude to ordinary fæcal abscesses, whether connected with strangulation of intestine or not. Then there is extravasation; but such cases appeal to the surgeon rather than to the gynæcologist. When an ovarian dropsy, or any such cyst, bursts into the bowel, it sometimes happens that fæces regurgitate into the cyst, generally along with fœtid air, and inflammation of the cyst is set up, with fever and sapræmic symptoms. Such cases generally, but probably not always, prove fatal. I have known life prolonged for months after the accident. A similar occurrence in every respect sometimes happens in the case of a perimetric or of a parametric abscess. In one such case under my observation the cavity of the abscess had a large opening into the rectum, and it got alternately filled with fæces and air and emptied. It could be felt easily through the hypogastrium, and its varying conditions, as to repletion and as to resonance, raised some puzzling questions, which were solved by dissection after death.

LECTURE XII.

ON HYDROPERITONEUM.

Fluid, yet not blood nor pus, may be found in large or in small quantity in the peritoneal cavity, in cases of burst ovarian cysts, in cases of ascites, and in cases that I shall particularly dwell upon to-day, to which I restrict the name of "Hydroperitoneum." At one time ovarian cystoma was confounded with other abdominal dropsies, as one of its names indicates. I think it is now quite necessary to make a further discrimination among cases that are generally called ascitic. The word "ascites" may be left for those dropsies which do not depend upon disease of the peritoneum itself—such, for example, as depend frequently upon disease of the liver or of the heart. Quite separate from these there is a class of cases of "hydroperitoneum," in which there is no organic or tangible disease discovered, beyond the conditions of the peritoneum itself, to which the collection of fluid can be referred. As gynæcologists we are specially interested in collections of fluid in the peritoneal cavity, but you are not to suppose that analogous collections of fluid do not occur. They are found in the thorax—hydrothorax; in the brain —hydrocephalus. Indeed, almost all the forms of hydroperitoneum that I shall speak of to-day are frequently accompanied by hydrothorax.

Hydroperitoneum and hydrothorax are frequently observed in children and in young people, and have been described; there being no discovered disease but the collection of serous

fluid in these serous cavities. Hydrothorax is most frequently observed in children and young people, probably because it is most easily diagnosed, as you can readily comprehend and will better understand as this lecture progresses. In adult women, as occasionally in pregnancy, and not rarely in ovarian dropsy, cases of simple hydrothorax occur. I have at this moment under my care the case of a very delicate pregnant woman who has hydrothorax—a collection of fluid in one side of the chest, which is evidently not of pleuritic origin, and is connected, as far as I can tell, merely with the delicate condition of her health.

This collection of serum in the peritoneal cavity has been the subject of very interesting illustration experimentally. I do not know of experiments which can illustrate the production of effusion of watery fluid from the peritoneum, but we see plenty of examples, in disease, of the extremely rapid accumulation of thin watery fluid in the peritoneal cavity. On the other hand, very interesting experiments can easily be made to show the rapidity of the absorption of fluid by the peritoneum; and to such I merely refer, saying that injection of large quantities of water into the peritoneal cavities of some of the lower animals—as of the dog—has often been done, and the water has been found to be absorbed in a very remarkably short time. These two facts are necessary for you to remember in order to understand the rapid variations in cases of hydroperitoneum, especially in the simple hydroperitoneum that I shall presently describe to you at length.

What is the nature of the fluid that is effused? When the case is simple, without any inflammation, it is a clear albuminous fluid, the albumen being of moderate amount. It is of a low specific gravity, which may be stated generally about 1008 to 1015; it forms no clot on standing; and under the microscope the sediment shows no pus nor blood, but merely endothelial products. This is a very vague state-

ment, and it is supplemented by this—that in these cases there may be healthy peritoneum or any degree of irritation of it, on to the condition called chronic peritonitis; and, as you have the irritation of the peritoneum increasing, you have the fluid becoming more dense, more albuminous, and generally then presenting a spontaneous clot when it is allowed to stand. The clot that it presents is a translucent or cloudy, flocculent, soft clot. It is not like the clot of coagulated blood, nor like the clot you see on boiling any albuminous fluid; it is much softer and translucent. This clot, I have said, is not observed in the simplest cases. In the simplest cases you have only a thin serum; but as cases advance in amount of irritation or inflammation, so you have the qualities coming that I have described, and you may have then under the microscope pus corpuscles and others found in the sediment in small quantity.

With these preliminary remarks I shall describe to you this condition of simple hydroperitoneum as a disease not rarely found in women—I think commoner in old women than in women during the child-bearing period of life—and found as the only physical indication of disease; the only adjunct to it being that the women are always in what may be vaguely called bad or depraved health. When the fluid in the peritoneum is in small quantity, it frequently comes unexpectedly and disappears unexpectedly. When it is in a large quantity it is liable to no such rapid variation: I am not aware that it spontaneously and rapidly disappears, but many cases are recorded, which were probably of simple hydroperitoneum, and where spontaneous cures, or cures after repeated tappings, took place; and I have seen such cases. Lately I have seen a large hydroperitoneum and right hydrothorax following an abortion with much bleeding. The fluid has all disappeared during the fourth month following the abortion. As an illustration of large hydroperitoneum I shall read to you a case which was lately in "Martha":—

A. O., aged nineteen, unmarried; catamenia regular; general health not the cause of any complaint; has no pain. Seventeen months before admission to the hospital she observed enlargement of the belly, and this has gone on increasing ever since. The abdomen is half-barrel-shaped, measures in circumference at umbilicus thirty-five inches and a quarter; presents everywhere distinct fluctuation; is dull on percussion except in the right flank, where resonance can be made to shift its position. Digital examination per vaginam (both before and after paracentesis) discovers nothing abnormal. Pulse and temperature normal. Tongue moist, clean, reddish. Apex of right lung presents some dulness on percussion, prolongation of expiration, and increased vocal resonance. Urine 1020, acid; trace of albumen. During ten days after admission the circumference of abdomen increased an inch and a quarter. Paracentesis was now performed, and fourteen pints and a half of clear straw-coloured fluid drawn off; specific gravity 1009; contains a considerable quantity of albumen; no clot formed. After tapping, girth twenty-six inches and a quarter. Dulness in flanks not absolute. Discharged in a comfortable state eighteen days after the tapping, about six months ago. This patient has returned since dismissal, and the abdomen is found to be slowly refilling. She said she would come back, and it is probable she has not again been tapped as yet.

Here you have a case where no disease is discovered but the hydroperitoneum. The examination of the woman's chest and her outward appearance indicate that she is a delicate and unhealthy woman; but we have from the histories of analogous cases reason to believe that there is nothing further in this case than what I have narrated. Lapse of time, in this example, removes the suspicion of malignant disease, which is a frequent cause of a form of hydroperitoneum.

Before I pass from this case I direct your attention to a

curious point in its history. After paracentesis the patient required catheterism for two days, and it appears to me extremely natural to attribute this need for catheterism to the condition of the belly, suddenly emptied of a large quantity of fluid, and thus probably presenting a state of negative pressure which prevented her evacuating the bladder. The urine accumulating in the organ, contributed to diminish this unnatural state of negative pressure. It was not passed spontaneously for two days, and, when it was drawn off, the bladder was probably not completely emptied. A very remarkable case occurred lately in "Martha," in which a similar explanation of a rare phenomenon is suggested.

A woman was almost moribund from suppurating ovarian dropsy, which it was considered proper not to remove. The post-mortem examination showed that this decision was just. In order to give her relief during the last day or two of her life, she was tapped. She was greatly relieved, but sank in about two days after the operation. In her peritoneal cavity, behind the uterus, there was found a large quantity of clotted blood. For this clotted blood no source could be discovered, and it is natural to suppose that it came from the uterus through a Fallopian tube, and that it was attracted to the peritoneal cavity by the condition of negative pressure in the abdomen produced by the rapid emptying of the immense quantity of fluid that was drawn off from the ovarian dropsy. These particulars have no bearing upon the subject of this lecture, but they are so interesting that I have interpolated them.

Now, how are you to diagnose a small quantity of fluid in the peritoneum? In the case of a small quantity of fluid in the thorax you have a greatly easier task, for reasons that the youngest of you who have practised auscultation and percussion can easily understand. The diagnosis of a small quantity of fluid in the peritoneum is based on the study of the mode in which fluid accumulates in the belly. If a

woman is lying on her back (as she almost invariably is when you subject the abdomen to examination), and if there are no intestinal adhesions, fluid accumulates first in the flanks, and then as it increases in quantity it accumulates in the lower part of the abdomen. When there is only a small quantity accumulated, there is not absolute dulness in the flanks or in the lower part of the abdomen. In both situations, if you press your finger firmly before percussing, you can, when the fluid is small in amount, find resonance—not tympanites. It is only after the fluid has accumulated to a much greater extent that you have absolute dulness; and absolute dulness is generally first to be found in the lower part of the abdomen. It is there that the accumulation first becomes sufficient to produce absolute dulness, however deeply you percuss.

You have in a case, such as the one that I have read, the opportunity of verifying these facts and learning this diagnosis; for you are quite sure that there is fluid left in the woman's belly after you have tapped her; and you know, what the history of the case proves, that the fluid is gradually accumulating, and you can watch it from day to day as it accumulates.

When the fluid is in small quantity, you have the following points to attend to in diagnosis; and I will only name them, because it is vain to describe them at length:—

Firstly: The peculiar feeling of an abdomen which contains fluid.

Secondly: The still better known feeling of the fluid if it is in a large mass or quantity in one space; the feeling of the fluid, often called feeling fluctuation, being a different thing from the feeling of the abdomen that contains fluid, and which I have named as the first point.

Thirdly: The percussion sound, which is dull comparatively where the fluid is lying in small quantity, dull absolutely where it is in large quantity. It is generally,

even in cases of very small collection, easy to make out a horizontal line, limiting comparative dulness below and greater resonance above, indicating how high the fluid has risen in the abdomen.

Fourthly: You make the resonant area vary by changing the woman's position.

Fifthly: When the collection is small you have no fluctuation. You are not to expect it. Fluctuation does not come until there is a large accumulation and a certain amount of tension.

Now, with these I shall contrast the signs of a large hydroperitoneal collection; and the signs here are true, whether there is a tumour in the midst of this collection or not. It is not an uncommon thing to make a diagnosis of this kind: "This woman has a large collection of fluid in her belly; whether there is anything more or not I cannot tell until I have drawn off this collection of fluid." We have had several cases in "Martha," in which, after drawing off the hydroperitoneal collection, we found that there was lying in the fluid a comparatively small tumour, ovarian or fibrous. The diagnosis of a large quantity of fluid is made by the educated hand feeling the abdomen; by a distinct feeling of fluid; by dulness on percussion, which, where the fluid is alone and in large quantity, is absolute, even with deep pressure; but which is not absolute when you press deeply on those parts where the bowels naturally float, as about the flanks and the umbilicus. Then you have fluctuation—an invaluable sign, because an almost infallible sign, of the presence of fluid. Then you have, in the cases that we are considering, the fluctuation felt where there is resonance on percussion. A beautiful case illustrating this is in "Martha" at this moment. Where you have fluid indicated by fluctuation, and the bowels indicated by resonance on percussion, both together, you may be certain that the fluid is a hydroperitoneal collection, unless some very rare condition exists.

The abdomen in a case of this kind maintains no definite shape; it is rounded, barrel-shaped, and frequently flattened a little. The diagnosis of a large quantity of fluid, where there are no adhesions, is a very easy matter if you attend to the points I have just enumerated to you.

Now, I have told you that in cases of hydroperitoneum you may have irritation or inflammation on to the stage called chronic peritonitis. In cases of chronic peritonitis there is frequently great difficulty in diagnosing the fluid collection as merely hydroperitoneum, because there is frequently cohesion, and, still more important, tucking up of the bowels by adhesion, and also the agglomeration of lengths of the bowels into hard lumps. These conditions, with hydroperitoneum, often produce such an exact resemblance to a cystic collection that it is very difficult to diagnose by any method of examination; and I have often told you that difficult diagnosis would frequently be better described as impossible diagnosis. In other words, you are left in doubt. Now, if you think of a case of a collection of fluid in the belly, with the bowels pressed by the fluid upwards in the same directions as a pregnancy or a large fibrous tumour or ovarian dropsy presses them, and the fluid as enclosed by adhesions, you can see that you have the physical conditions of a surgically unilocular ovarian dropsy; and the difficulty is, as I have indicated, increased often by feeling hard masses, consisting of bowels glued together in a peculiar way. By changing the position of the woman and re-examining repeatedly, attending to her history, and going over the peculiar signs that I have described to you as indicating a large quantity of fluid, you may arrive at a correct decision. You must take care not to be misled, as I have known repeatedly happen, by feeling, after tapping, hard masses which are supposed to be unruptured or untapped ovarian masses. These hard masses in a case of chronic peritonitis sometimes disappear, the adhesions being

removed. The woman, in fact, gets cured, and of course in that case all the difficulty of diagnosis is removed, and what may at first have been a puzzle is explained.

When a case of ovarian dropsy presents itself to you, you frequently have an easy distinction, because you frequently have such a peculiarity of shape, and such a maintenance of shape, as is only to be explained by the existence of separate cysts. You frequently have such limitation of fluctuation as is evidently only explained by the circumstance that you are percussing different collections of fluid. These circumstances are frequently pointed out to you in "Martha," and I need not dwell further upon them.

I have now gone over the great features of a disease which is not rare, of which I have given you an example, and which consists in the collection in the abdomen of a large, but more frequently of a small, quantity of fluid. These cases are treated more appropriately by tonic medicines and tonic regimen than by diuretics. A justly favoured medicine in cases of this kind, whether of simple hydroperitoneum or of chronic peritonitis with collection of fluid, is the syrup of the iodide of iron. Cases are not rare in which, as in the case that I have read to you, a cure (of what may have been supposed to be ovarian dropsy) has followed this treatment. In many of these cases, when the accumulation is large, another method of treatment is adopted, namely, to draw off the fluid. I have seen several cases in which still another treatment has been unintentionally or designedly adopted, that is called nowadays the exploratory incision. I am not advising you to do this, or to abstain from it. It is not very rarely done for various reasons, and you find nothing but a hydroperitoneal collection. You may find the peritoneum, to the eye, perfectly healthy; you may find it red like raw beef; you may find it in a granular red state, or even covered with fretted granular whitish yellow lymph; or you may find it studded

with tubercles. In several cases I have known this operation followed by what is called cure—that is to say, the fluid has been discharged in this way and never has reaccumulated, and this even with a peritoneum red and granular, or having large surfaces of granular lymph. Many cases are recorded, and many cases occur, of cure by tapping, and sometimes after frequent tapping. Tapping is, however, an operation to be done in some cases where you have no hope of cure. It is not only in cases of hydroperitoneum of a simple kind, but in cases of hydroperitoneum connected with malignant disease, that you sometimes give great relief by tapping and evacuating the peritoneal cavity. A case of this kind occurred in the hospital not very long ago. A woman had a double solid ovarian tumour with enormous hydroperitoneal collection. She was sent by her doctor and carried into the ward avowedly to die in a few days, and certainly hopelessly ill. After tapping and drawing off a large quantity of thin serous fluid she rapidly recovered, and left the ward in good spirits and apparently in fair health. She returned to her work as a washerwoman, and she went on with it for several months, and then took to her bed again, and died of the malignant solid tumours of the ovaries, and with a smaller re-accumulation of the fluid. You observe that in that case there was a return to fairly good health temporarily while a malignant disease was progressing, and the reversion to health was manifestly due to the relief afforded by the evacuation of the peritoneal cavity. Recently cases have been successfully treated by oophorectomy, removing small but diseased ovaries which produced the hydroperitoneum. But credit for curing must not be too readily taken by the practitioner, for the fluid may spontaneously disappear, which I have known to occur in a case when it had been once drawn off by tapping, and where the cause was malignant disease in the abdomen.

Tapping must be done with the greatest care, and it

should always be done antiseptically. The operation may be fatal if septic air happens to be drawn into the peritoneal cavity through the opening that you make. I had a case under my care, before the antiseptic treatment was fully introduced, where it was necessary to tap the abdomen for hydroperitoneum in an old woman who had an old uterine fibroid. The tapping was done by her physician in the country, and it proved fatal in consequence of air getting into the abdomen through the little aperture and producing putrefaction of the fluid in the peritoneal cavity. That was a great disaster which, I think, you can avoid with nearly absolute certainty by operating in a proper manner. You may draw off the fluid by the ordinary trocar and cannula; but there is an improvement on this. The improvement is with a view to avoid the misadventure of the opening of the cannula coming against the bowel or omentum so as to occlude it. The peculiar instrument which I show you here has a termination something like that of a female catheter. It is pushed through an opening made in the abdominal wall by a bistoury; it can be propelled among the bowels to varying distance, and made to move about in the peritoneal cavity so as to drain off all that can be reached. Here you have no risk of the bowel closing the terminal aperture, for there is no terminal aperture; and if the bowel closes one lateral aperture it is sure to leave some of the other lateral apertures open.

Before concluding, I shall say a few words upon hydroperitoneum as a complication of other diseases, not as a simple disease. I need not repeat what I have already said, that you have often hydrothorax along with hydroperitoneum. It is always held to be an unfavourable sign of any abdominal tumour to have around it a considerable accumulation of fluid. The malignant diseases of the abdomen—malignant ovarian tumours, malignant tumour of the uterus, malignant disease of the omentum—have always, or almost

always, large quantities of hydroperitoneal fluid. Hydroperitoneal fluid is frequently found with ovarian dropsy. It is often, in this case, very difficult to say whether it is hydroperitoneal fluid or fluid from a burst cyst. In ovarian dropsy a large cyst may break, and throw into the peritoneum a quantity of thin serous fluid which does not irritate the peritoneum at all, or but very slightly; or you may have numerous small cysts forming on the outside of the bigger cysts, and bursting into the peritoneum. There is no doubt, however, that you have frequently simple hydroperitoneal collections accompanying ovarian dropsy, just as you have in the same cases frequently also hydrothorax, which latter cannot proceed from a burst cyst. We had lately in "Martha" a splendid example of this in an old woman sixty-eight years of age, in which there was an enormous true hydroperitoneal collection. Its composition alone almost demonstrated this. In that woman ovariotomy was performed, and her case illustrated an interesting point in this form of the disease—that when you remove the source of irritation the disease ceases. That old woman had no return of her hydroperitoneum after the ovarian cystoma was removed. She left the hospital, and was known to be for a long time afterwards quite well. Solid ovarian tumours are very rare. They are generally malignant, and they generally are accompanied by a large amount of hydroperitoneal fluid. Uterine fibroids are not rarely the cause of hydroperitoneal effusion, and you find it in two forms. On examining some women affected with uterine fibroid, still small, you can feel something like *ballottement* from the motion of a tumour floating about in a collection of fluid which fills Douglas's space. But you also have, not very rarely, large hydroperitoneal collections with fibroids. We have one at present in "Martha," but that case I shall not read to you because there is some doubt about it. There is no doubt that she has a large uterine fibroid and a large hydroperitoneal collection, but there is considerable doubt

whether she has not, in addition to that, malignant disease in the pelvis. We have had lately in "Martha" several cases of peri- and para-metritis with hydroperitoneal collection; and you know there is a disease called serous perimetritis, which may be described as perhaps only an extreme condition of the same, where the fluid is contained in a cyst formed by peritoneal adhesions and viscera. Chronic peritonitis and tubercular peritonitis have, as one of their great peculiarities, hydroperitoneal collection. Then in cases of cancer in the abdomen you have often, as the only indication of the disease, a collection of fluid. I shall read an interesting case of this kind to you now—a case of cancer beginning somewhere in the neighbourhood of the uterus, and producing, as its only great indications, degradation of the general health and a hydroperitoneal collection.

K. B., aged thirty-nine, married for sixteen years; four children—the last seven years before admission to "Martha." Catamenia began at sixteen, and are regular. Has been in warm climates. Never had ague nor jaundice. Liver dulness natural. Urine acid, 1025; no albumen. Abdomen began to swell six months ago, and pain also appeared in the right iliac region. Abdomen uniformly prominent, semi-globose; dulness on deep percussion nowhere absolute except in hypogastric region. The uterus is found a little behind and above its natural position. Behind it is a small tender hardness, presumably an ovary. Uterine cavity measures two inches and a quarter. Girth on October 29, 1878, thirty-nine inches and a quarter; October 31, thirty-nine inches and three quarters; November 2, forty inches and a half; November 4th, forty-one inches and a quarter. November 5, tapped, and nineteen pints drawn off of thin, clear, greenish-yellow fluid; specific gravity 1020; considerable amount of albumen; no clot forms. The sediment contains a few granular cells twice as big as blood corpuscles. After tapping, some hard masses of the size of a walnut can

be indistinctly felt in the hypogastric region. General health improved after the tapping; but the abdomen was rapidly refilled. She left the hospital, and returned on January 4. Girth forty-five inches and three quarters. Thirty-two pints drawn off. Fluid as before—highly albuminous; chlorides; no coagulum. Sediment contains numerous cells declared to be cancer cells. Soon after this she left the hospital. It is understood that subsequently her abdomen was, in another place, opened by exploratory incision, and small malignant growths observed in the lower part of the abdominal cavity. She is reported as being now tapped about every two months; and the hard masses in the lower part of the abdomen have increased in size." Plainly a case of malignant disease beginning and showing itself originally only by the hydroperitoneal collection.

The last thing I have to mention is an extremely rare disease in which hydroperitoneal collection forms the most prominent feature also—not cancer of the abdomen or of any of the viscera in it, but cancer of the peritoneum itself —an extraordinary disease that generally advances with rapidity, and which is characterized by the presence of a large quantity of fluid, by the absence of distinct tumour, by the fluid being often blood-tinted, as may be seen if it is drawn off. Rapidity of increase you expect from the immense surface which can be easily infected by continuity or by contiguity. This disease is, from its acuteness and rapidity, often called cancerous peritonitis, although there is no inflammation necessarily attending it. I had, some years ago, a remarkable case in a fine, healthy looking, handsome, stout woman, who came into the hospital with the symptoms I have described to you, and who in six weeks died in a state of extreme emaciation—so rapidly had the disease advanced. At first in that case there was nothing but hydroperitoneum; but afterwards, and long before she died, the diagnosis of cancer proper was made.

LECTURE XIII.

ON MENORRHAGIA.

It is a matter of course that I shall go over this subject as we have seen it illustrated in "Martha," or as I see it illustrated in my own practice; and I say this, because, if you look into the books, you will see descriptions of menorrhagia as divided into two kinds—active and passive. I know nothing of this distinction. You will find also a distinction drawn according as the discharge is of menses or of blood; but I know nothing of this distinction. I know of menses, and other slight losses of blood from the interior of the womb are the same thing as menses in physical characters. Then, again, you will read in books accounts of symptoms. I know of no symptoms except such as are produced by loss of blood; that is to say, I know no special, still less any essential, symptoms of menorrhagia, as distinguished from any other loss of blood.

In all your studies, with a view to practice, I urge upon you the importance of attending to the theory of nomenclature, because a great deal of misleading arises from neglect of this. It is well known to be a common proceeding with inferior practitioners to treat a disease according to its name, but the dangerous influences of nomenclature spread wider than the narrow limit of bad practitioners. The best names given to diseases, are, upon the whole, those that have no scientific meaning, that imply almost nothing; these are the least misleading. A common mode of naming a disease is,

as in the example before us, by its chief symptom. Menorrhagia is, for many, a name for all cases where there is copious external loss of blood at monthly times. But you have here an illustration how much or how little may be conveyed by a name, for a disease, which is, in many cases, essentially a menorrhagia, is called hæmatocele; and if you are to have a correct view of this great disease you must keep in mind that in a great number of cases it is a menorrhagia, as you have already learned from the cases you have seen in "Martha." Menorrhagia and metrorrhagia are, in the immense majority of cases, not truly names of diseases, but names of signs.

A very important part of this lecture I devote to what menorrhagia is not. Many of the things that it is not I shall merely mention; others I shall speak of at greater length.

When you are called to a case, all the diseases I shall name should be made to run through your mind; for, as I have already told you, if you do not think of the diseases, of any of which a case may be an example, you are very unlikely to diagnosticate the case properly; so seldom is a direct mode of diagnosis available.

If a woman has menorrhagia or metrorrhagia, she may have a threatened abortion, or a threatened miscarriage, or a polypus. She may have a uterine fibroid, a uterine cancer, or merely a catarrh of the neck of the womb, or an abraded condition of the neck of the womb which may be confined to that part or spread beyond it. But there are more recondite conditions which you must also keep in mind when you are diagnosing a case in which there is menorrhagia or metrorrhagia.

One of these is endometritis, of which loss of blood is a symptom, sometimes called pseudo-menstruation. A case, probably of this kind, where the discharge had lasted fourteen years, a few days ago ran away from "Martha," being obliged to look after her husband. That case was probably

one of fungous or hæmorrhagic endometritis; but the diagnosis was not completed. In many cases, as you have often seen illustrated, perimetritis and parametritis induce pseudo-menstruation, probably by producing congestion, if not inflammation, of the mucous membrane of the cavity of the body of the uterus. This spreading of irritation to neighbouring organs is not confined to the uterus, for you frequently observe it in the case of the bladder. The bladder may be distorted into any shape, squeezed up into any corner, without any vesical symptom being produced; but in cases of parametritis and perimetritis it is a very common occurrence to have irritable bladder; the irritation being communicated to the slightly displaced and confined organ from the neighbouring inflammation. Ovaritis, of which you have seen many cases in "Martha" is very often accompanied by prolonged menstruation; and in most cases tenderness of the cavity of the body of the uterus indicates that there is a degree of endometritis accompanying the ovaritis. Vaginitis of certain kinds, as I pointed out in a recent lecture, is not a rare cause of loss of blood: and other morbid conditions of the vagina produce what passes as menorrhagia. A rare case of this kind is well worth mentioning. I was called in, not long ago, to a young lady about twenty-five years of age, who was with very great difficulty induced to seek advice for what she herself and her physician regarded as a very insignificant menorrhagia. She was never well. Ordinary remedies having completely failed, she very properly submitted to a vaginal examination, and on the middle of the posterior wall of the vagina there was detected a small growth, soft and about the size of a split pea. It was not tender, but it had a suspicious feeling which I find it impossible to describe. As soon as it was ascertained that it was growing I destroyed it by a strong caustic. At that time there was no disease discoverable but this little tumour; but within three months the patient was dead from a

cancer of the whole of the lower part of the pelvis, which began in the way I have mentioned.

A very important source of deception I must now mention and impress upon you, because it is not generally known. Bleeding often takes place from surfaces which are merely tender—which can scarcely be called diseased. These are found around the orifice of the urethra and that of the vagina. In one sense, cases of this kind—and they occur both in young and old—are very trivial; but, if you consider the anxiety of mind and annoyance caused by such loss of blood, you will see that it is important; and, for the success of a practitioner such cases may be critical. I can best illustrate this by cases. A young sterile married lady consulted me for what she called menorrhagia, which never came on while she was at rest, but only when she walked. She had confined herself to the sofa to restrain it. When she consulted me I could find nothing the matter with her. At my wits' end, I insisted upon her walking and coming to me while the bleeding was going on. It was then, for the first time, that I made quite sure that she did bleed, and I found the bleeding slight in amount and coming from around the orifice of the urethra. Now, this kind of loss of blood is still more alarming in an old woman, for reasons you well know, and I have in several such cases been able to set a patient's mind at rest, by seeing the blood running from tender spots around the urethral or vaginal orifices. This is not new to you, for I have pointed out to you examples in "Martha," in which, when those parts were visually examined, there was a little bleeding from the mucous membrane of the orifice of the vagina. In some this results from walking, in others from no discoverable cause. In all it has been cured by mild astringent lotions to harden the parts. Another source will occur to you in newly married women. The husband will come to you, saying that his wife is menstruating profusely, and you

find that this arises from lacerative injury due to sexual connexion.

Varicose veins in the vulva are not very rare in women who have had large families, and sometimes they occur even in sterile women. They may be burst or be opened by injury, and the bleeding from them is sometimes fatal.

Now, all these conditions that I have gone over are very naturally confused with menorrhagia and metrorrhagia until a careful diagnosis is made; and sometimes this careful diagnosis is never made, and the case is mismanaged, or, if successfully managed, it is a matter of mere good luck, not of intelligent skill.

Before going further I must tell you the distinction of menorrhagia from metrorrhagia; or, rather, I must tell you the want of distinction, for that is as important as the positive side of the matter. A case is one of menorrhagia, and this includes an important class of diseases, when there is nothing to account for the excessive loss of blood, and when there is every reason to presume that the bleeding is menstrual—that is, from the interior of the body of the uterus, at the usual monthly times, and with the usual menstrual symptoms. If you have all these conditions combined, the case is then justly named menorrhagia. When you have absence of indications that the bleeding accompanies ovulation, then you call it metrorrhagia; but the distinction is not really of great importance. In no case is the distinction scientifically sure, but in many it is, for practical purposes, sure enough, and when it is made out it helps you to be an intelligent practitioner in any particular case.

Suppose, then, that you have a case of this kind before you—one that is not to be passed over by writing a prescription and talking to the patient, as very many are—you must then inquire into the following particulars carefully and minutely. First, as to the quantity lost. With regard

to this, every individual is, to a great extent, a rule for herself. What in one woman would be menorrhagia would in another be classed as amenorrhœa; so great are the variations within the limits of health in different women. Indeed, it would be difficult to say that there is any certain limit as to greatness of quantity except that of influencing the general health. I have seen many cases described as alarming menorrhagia in which it was only necessary to inspect what came away in order to make them appear ridiculous. You must not treat a case for long without seeing the discharge for yourself, to judge its amount. A common way of measuring the quantity is by the number of cloths a woman requires during twenty-four hours. Second, the presence of clots and the size of the clots must be inquired into. Third, the time during which the flow goes on is important, for you can easily see that length of time may make a common menstruation of the utmost importance. Within moderate limits, in respect of time every individual is a law to herself. Fourth, you inquire into the quality of the discharge, not only as to the presence of clots, but as to whether it is decayed blood or not, bright red, or chocolate-coloured, or like coffee-grounds. With regard to this brown blood you must remember that a very small clot will, by gradually dissolving, stain for a long time the mucous discharges from a patient, and may deceive her into thinking that she is continually losing blood, whereas the whole matter, intelligently regarded, may be quite insignificant. Then, fifth, you must inquire into the interval or time of recurrence. And, such is the extreme anxiety—the injudicious overcare—manifested by many women, and by many mothers—that you will often be consulted about cases called, or held to be menorrhagia, where the recurrence is only a few hours or a day or two before the time regarded as proper; and I must ask you not to yield yourselves as abettors of any such nonsense, while at the same time you do not fail to be kind

and considerate of the feelings of your patients. Such a variation is not a morbid condition, and is not to be treated by drugs. But if the recurrence is greatly in advance of the usual and proper time, then you may have to consider the whole circumstances of the case with a view to its proper management or treatment. Lastly, a most important particular is whether the loss is injuriously affecting the woman's health: it may do this without producing evident anæmia; if it does also produce anæmia, there is no need of further proof that it is producing constitutional mischief.

When you are considering the pathology of a simple menorrhagia or metrorrhagia, what points are you to study? You think of congestion of the uterus or of increase of the blood-pressure; and you may be sure that whatever part is weakest under the influence of blood-pressure will be the first to yield. In most people, especially in youth, the Schneiderian membrane is the weakest part, and yields. In old people this yielding of the Schneiderian membrane, and consequent epistaxis, is often an extremely fortunate occurrence, saving them from the disastrous effects which are sure to follow the occasionally alternative yielding of some atheromatous vessel in the brain. Many cases of menorrhagia and metrorrhagia at all periods of life are no doubt analogous. Congestion of the uterus occurs periodically, as you know, in the menstrual periods of women; it occurs occasionally in the old, and also in the very young. The spurious menstruation of infants almost certainly depends upon a uterine congestion, very like that which occurs in adult women—a curious pathological condition, which has its analogue in the congestion, secretion of milk, and sometimes even abscess in the mammæ, of infants.

Then you think of relaxation of the uterus. On examining women who are menstruating the uterus is found to be bulky, soft, and its os somewhat more open than usual; and this condition may proceed to an exaggerated degree, in

menorrhagia and metrorrhagia; indeed, in some cases there is, even in the virgin uterus, a dilatation of the whole uterus much beyond its natural dimensions, and the formation of a soft clot in its inside. This dilatation occurs more frequently in women who have had children than in those who have not; but its occurrence, even in virgins, has been verified post-mortem, and in such cases the presence of the clot in the uterus, if it is at all long retained, becomes a source of irritation, and leads to persistence of the bleeding.

Next, you must think of the state of the blood; and this important subject I must dismiss in a few words. When a woman is chlorotic she fortunately has generally amenorrhœa, but if not, she will be very liable to have menorrhagia. And you have here an illustration of a vicious pathological circle. The menorrhagia increases the chlorosis, and, *vice versâ*, the chlorosis aggravates the menorrhagia.

Lastly, the condition of the bleeding surface must not be neglected; and it is almost certainly very different in the young from what it is in the old. In the former you have probably a very much healthier tissue-condition than in the latter. In both, no doubt, you have the bleeding surface in a state of partial denudation; and in the old you probably have other senile conditions added to the state of superficial denudation which occurs in all menstruating women. In fatal cases the mucous membrane of the cavity of the body of the uterus has been found sometimes partially separated, and it has also been found to contain small disseminated ecchymoses.

Now for an enumeration of the varieties of true menorrhagia.

In the very young you are liable to have it with the first appearance of the menses. I have seen a young woman, who ever afterwards menstruated naturally, at the point of death from excessive hæmorrhage at her first menstruation. In some fatal cases there has been noticed a condition of scorbutus or of hæmophilia.

In the newly married you find a common menorrhagia arising from the recent marriage. The woman supposes herself to be pregnant, passes her usual time a period of weeks or even months, and then has a profuse menorrhagia, which she takes for a miscarriage, and you must be on your guard against the peculiar pride of sterile women, who boast of this as a miscarriage, in order, apparently, to save themselves from what they consider the discredit of absolute sterility. Unless ovuline structures have been seen in the discharges, the evidence of miscarriage is deficient.

In mature, healthy women, menorrhagia is very rare, except as the result of some constitutional affection—the commonest causes being excessive childbearing and suckling, both of which probably act by producing a watery condition of the blood, which flows freely from an ill-contracted uterus. It is at this time of life chiefly that you see illustrations of general constitutional affections producing menorrhagia. Obstructive diseases of the heart, of the lungs, of the liver, as they are liable to lead to other hæmorrhages, may naturally be expected to lead to menorrhagia or metrorrhagia. I am bound to say, however, that in practice I have not been able thoroughly to satisfy myself of this influence, except in the case of the liver.

A pregnant woman may have a menorrhagia. This I merely mention. It occurs mostly, if not exclusively, in the first months, and may recur for two or three months. Then, in women recently delivered, but who have passed the six weeks of the puerperal state, menorrhagia occurs not rarely, and sometimes very severely.

In elderly women it is common about the period of the change of life, and it may occur even after the change of life. I have seen some cases in which I could not doubt that sexual excitement was the cause of the loss of blood in women long past fifty-four, which you are told is the limit of child-bearing. I dissected not long ago an old lady

who had occasional metrorrhagia, and who believed herself to be sexually young. The body of the uterus was large, like that of a young woman, while the cervix was atrophied; and the ovaries contained structures which were, so far as the naked eye could judge, like large menstrual corpora lutea.

The treatment of this affection is easily described and remembered, because it can all be put under satisfactory theoretical rules. It is not treatment by specifics or remedies which have an unaccountable influence.

In all cases where the loss is great you enjoin rest, but only in such. You can easily understand that exercise, stimulating the circulation, will tend to increase the flow. The rest you prescribe must be horizontal; and the patient must not, in extreme cases, get up even for purposes of urination and defæcation, for the blood-pressure is greatly and injuriously increased by stooping and bearing down in performing these functions.

Then we come to medicines. Of all with which I am familiar—and I have tried a great number—ergot stands first. In obstetrics you are generally told that ergot produces its effect in about fifteen minutes: that is doubtful even in parturition; but in the unimpregnated woman you must not expect it to act thoroughly till days of its use have elapsed, and in some cases I have observed its use has had no result until it has been continued for weeks without intermission. After ergot, in popular estimation, come gallic and tannic acids. I am not quite sure that they have any effect at all. They may have an effect, and be as rationally used as other medicines. I have used them extensively, and the impression they have left on my mind I have just told you. The medicine which seems to me next best after ergot of rye is sulphuric acid, often combined with some saline; and no injury is done if the saline produce slight relaxation of the bowels. You have not long to wait for sulphuric acid to produce its effect. You may have to give it in large doses,

and frequently; for instance, you may give one drachm, or even twice as much, in a day, dividing it into frequent doses. The beneficial influence of digitalis and cannabis indica is almost certain, yet in point of trustworthiness these remedies come considerably after ergot and sulphuric acid.

One of the most powerful influences, and one with which I have been long familiar, is the use of heat. Heat is supposed by most people, professional and non-professional, to favour bleeding; but its influence in causing the contraction of involuntary muscles has long been known, and its use in cases of menorrhagia and metrorrhagia, whether simple or not, is very valuable. It is to be applied internally in the form of irrigation, by the passing through the vagina of a large quantity—pints—of water at 100° to 110° Fahr. This is not to be done long at a time, being continued five to ten minutes, and repeated several times a day. It is almost universal to swear by cold as a hæmostatic in our diseases, and I need not say that I have seen it used, and used it myself many times. In the form of ice, applied to the external parts, it is, I think, quite as often injurious as not. It is best used by irrigating the vagina just as is done with hot water, or by placing small bits of ice in the vagina. Even used in this latter way, my impression is that its value is inferior to that of heat.

If all these means fail you may have to resort to a plug. In the virgin this is very difficult to insert. The operation indeed may be quite impracticable. But if the woman be married, and still more if she has had a child, it is easily made available, and you will often be astonished at the good result of even what seems to be a very imperfect plug. You will sometimes find a small sponge capable of controlling quite a formidable menorrhagia.

I have told you that there are cases of simple menorrhagia, even in young virgins, that prove fatal; and you are not to suppose that we have nothing to do for them beyond

what I have already mentioned. The last remedy is to paint the bleeding surface with "styptic." If the womb is dilated the bleeding surface may be easily reached. If the os uteri be not dilated you can pass such an instrument as this hollow probe and inject the styptic through it, which will have the same effect as painting. The instrument you see is fitted to a small syringe.

Many of you will remember a fatal case of this injection with perchloride of iron, and therefore I hesitate to recommend that drug, although I think it is the most powerful styptic we have. I would advise you to use tincture of iodine; or, if you do use perchloride of iron, it should not be by injection. The bleeding surface may be swabbed with it, so that it may not pass into the veins, which was the disastrous accident in the case referred to. You may also try other drugs, such as a solution of alum.

LECTURE XIV.

ON SPASMODIC DYSMENORRHŒA.

THERE are many kinds of dysmenorrhœa, some of which have little claim to the name. The most characteristic form of dysmenorrhœa is that which I have called spasmodic. A woman may be said to have dysmenorrhœa if she suffers from headache during the monthly period, or if she has sickness. In the same way she is said to have ovarian dysmenorrhœa if she has pain in one or other ovary during the monthly period. But that is not dysmenorrhœa proper. There are two chief kinds of dysmenorrhœa—the inflammatory and the spasmodic. Spasmodic dysmenórrhœa is extensively known by the name of neuralgic; latterly it has been generally described as obstructive or mechanical dysmenorrhœa; these words "obstructive" and "mechanical" implying a theory of the disease which I shall speak of presently, and which I am sure is quite erroneous. This disease called neuralgic, obstructive, mechanical, or spasmodic, is a disease of the nature of a neurosis, in which the contractions of the uterus cause great pain.

Contractions of the uterus are much better studied, for reasons that are plain, in the lower animals than in women; the contractions, particularly, of the unimpregnated uterus. From observation of them, and for other reasons, physiologists are agreed that there are contractions more or less regularly going on in the unimpregnated uterus of women, and especially in menstruation, whether healthy or morbid.

The disease we are now considering is, in its essence, morbid contractions of the uterus occurring in connection with menstruation.

On the subject of these contractions I shall say a few words. In some conditions of disease, as in some uterine fibroids that are embedded, the contractions are easily made out; in other diseases, such as dysmenorrhœa, they are only believed to exist as the result of an argument. Some of the phenomena, which are explained generally by contraction of the unimpregnated uterus, are not due to contractions at all; they are due to the pressure relations of the uterus—a very difficult subject. For instance, if you place an intra-uterine pessary or a tangle tent into the uterus, it is generally expelled if a plug is not put into the vagina to keep it in its position; and this expulsion of the tent or of the pessary is supposed to be produced by contractions of the organ. It is very natural to suppose so, but I am sure it is usually not the case. It arises from the condition of the woman's uterus as to positive or negative abdominal pressure. You can easily study this subject in any case in which you are inserting a tent or a stick of zinc-alum into the uterus or its cervix. You will find in most uteri the tent or the zinc-alum slips out; but it is manifestly not on account of contractions. Contractions are not brought on so quickly and in a way so exactly in accordance with the repeated pushing in of the tent. Besides, you will find many uteri in which the tent or the pessary, instead of coming out, has a tendency to go in—an injurious tendency. Cases are not very rare in which a metallic pessary, with a button upon the lower end of it to keep it in its place, is drawn into the uterus altogether—button and all. I have seen this happen several times; and considerable difficulty arises in removing it, when it has thus got incarcerated in the uterus. These facts contribute to show that the phenomena we are speaking of are not caused by uterine contrac-

tions; and I shall tell you another remarkable phenomenon which illustrates the same thing. The sticky cervical mucus, as you are all aware, in 999 cases out of 1000 hangs out of the uterus into the vagina; but I have seen it, instead of hanging out of the uterus into the vagina, ascending, and filling the cavity of the body of the uterus. This forms a good text, of great importance in pathology, which I hope to lecture upon some other day. This function of the uterus when it acts in the way I have mentioned, drawing the cervical mucus into the cavity of its body, instead of expelling it, certainly tends to produce morbid conditions of the uterus itself. The same condition is illustrated in pregnancy. The ascent of the pregnant uterus itself is a phenomenon in this category; but, during pregnancy, as I have seen in several dissections, the cervical mucus, instead of running into the vagina, ascends and runs into the uterus, and hangs into the uterus instead of into the vagina; and this circumstance has led to considerable mistakes recently in the investigation of the condition of the cervix uteri during advanced pregnancy.

The best evidence we have of uterine contractions during menstruation is from the observation of cases of dysmenorrhœa spasmodica, and this observation reveals that the contractions may be either clonic or tonic. The clonic contractions are probably the more frequent. By "clonic" you know I mean come-and-go contractions, like uterine pains. You will find women suffering from dysmenorrhœa tell you the pains come in pangs; and in the most violent pangs, in the most severe cases, the contractions, not only affect the uterus, but may also, very rarely, affect the bladder and rectum, producing strangury and tenesmus, and also violent abdominal bearing down by reflected influence. Tonic contractions of the uterus, however, are not uncommon, and then you have the pain incessant, probably because the contraction is almost unceasing. Whether the

spasms are clonic or tonic they very seldom last twenty-four hours, generally only one, two, or three, in great intensity.

Some have sought for an analogy for this disease in urethral stricture. I shall mention two analogous diseases. The first is after-pains. You will often read in books that when a woman has after-pains there is a clot or a retained bit of placenta, or something which the uterus is attempting to expel; and this may be true, but such after-pains are not severe. That is not a disease—that is a healthy condition of the womb; the womb is doing its duty, as it were, and such after-pains are not very painful. The real disease of after-pains is a disease in which the recently emptied uterus goes into the most violent and painful contractions, without any discoverable object in view; and a severe case of this kind is a most painful disease, far more painful than the after-pains which come to expel a clot or a bit of retained placenta. Now, these violent after-pains are, I believe, connected not only with a morbid condition of the muscular tissue, but chiefly or primarily with a catarrhal condition of the mucous membrane covering the inside of the body of the uterus, a condition not without several analogies with the healthy menstruating uterus.

There is another disease not uterine, with which spasmodic dysmenorrhœa has an analogy—spasmodic asthma. This is a disease affecting muscular fibres, and it is induced, as you know, in those who have a tendency to it, by the slightest catarrhal affection of the trachea and bronchi; and it is cured under a copious secretion from the mucous membrane; just as dysmenorrhœa is generally cured when the menses run freely. In healthy menstruation a woman has the mucous membrane of the cavity of the uterus in a catarrhal condition; it is not called catarrhal because it is natural and healthy, while catarrh implies something morbid.

Spasmodic dysmenorrhœa may be combined with the exfoliative or membranous form: or rather, menstrual

membrane may be discharged, the violence of the contractions separating and expelling bits that are possibly otherwise quite healthy. Such bits do not present evidence of being separated by hæmorrhage into the middle of the mucous layer, in adhering laminar clots.

Spasmodic dysmenorrhœa occurs at any age. It occurs in women otherwise most healthy. It is especially liable to attack women at the marriageable age; still more, women who, although married, are sterile. It is very liable also to attack women who have had large families, we may call them excessive families; although, in such circumstances, the elderly woman makes less to-do about it, and does not get for herself the same amount of sympathy as the young woman does. There is another set of circumstances in which it frequently occurs—namely, when a fibroid is beginning to grow in the muscular tissue. If you find an elderly menstruating woman having persistent dysmenorrhœa, after years of health, you should suspect that there is some growth of this nature going on, and you will frequently find it verified in the further history of the case. Only a few minutes ago I saw a case of this kind, where a woman, nearly forty years of age, began about two years ago to have severe dysmenorrhœa. She had seen several doctors of eminence, who told her that her disease was simple dysmenorrhœa, and I have no doubt they spoke truly as far as diagnosis could go. But now, after two years, there is a considerable fibroid in the uterus, and there can be no doubt the dysmenorrhœa was started by the growth of this tumour, which at first was too small to be discoverable. Intense dysmenorrhœa, with fibroids of considerable size, is also far from rare. The disease I am considering is a disease that frequently occurs in minor forms, especially in connection with unnatural or morbid conditions of the uterus, besides those that I have mentioned. For instance, recent authors say a great deal about its connection with uterine displacement. But dysmenorrhœa produced by this

cause is slight in degree, and is a symptom of the displacement, or of some morbid condition complicating the displacement. This displacement has been a favourite cause with those who believe that the dysmenorrhœa is mechanical or obstructive. They say that flexion of the passage obstructs the discharge of the blood. Nothing could be more erroneous. There was recently exhibited to the Obstetrical Society the section of a uterus in the extremest degree of acute flexion; and anybody who takes the trouble to look at that section will see that the flow of menses along that flexed uterus would be obstructed only in a degree that practically cannot be of the slightest moment—not nearly so much obstructed as the passage of the blood along a flexed limb; not nearly so much obstructed as the passage of the water along a bend of the river Thames. Blood could run out through that model of an excessively flexed uterus just about as easily as if it were straight. In such cases the blood is said to be dammed up in the body of the uterus; and the uterus is described as thereby hypertrophied or dilated. I am satisfied that that is bad pathology. When you have dysmenorrhœa spasmodica accompanying real mechanical difficulty, then, as I have already said when speaking of after-pains produced by a clot in the uterus, or a retained bit of placenta, you have very moderate pain; you have not a fine specimen of the disease at all—the dysmenorrhœa is trifling. This is exemplified in cases where you have truly mechanical difficulty, cases of dysmenorrhœa membranosa, where the membrane has to be expelled through the narrow channel. Well, in such cases, everybody knows the pain is slight compared with that of a characteristically severe case of the disease we are discussing.

Dysmenorrhœa spasmodica may occur at any time. The woman may have the violent pains of dysmenorrhœa apart entirely from ovulation or menstruation. In the majority of

cases the pains begin before menstruation begins; in the majority of cases it is most severe just as the menses begin to flow; and in the majority of cases it diminishes as soon as the flow is free. It is seldom that a woman has violent dysmenorrhœa after the first two days of menstruation; for within the first two days of menstruation the quantity of the discharge has reached its highest. This fact, which is subversive of the mechanical theory, is familiar to women. Nothing is more common than for a woman suffering from dysmenorrhœa to tell you that she has most pain when she has least discharge—that when, for any reason, the menses become scanty, the dysmenorrhœa becomes worse and worse; but when the menses become abundant the dysmenorrhœa is diminished.

Dysmenorrhœa not infrequently, even in the severest cases, disappears for one or two periods. In one of the severest cases I ever saw, a young woman in whom I was very reluctant to resort to mechanical treatment, the disease disappeared during her residence in Ireland for several months; it reappeared as soon as she came home to England. That fact, which I have seen illustrated in many other examples, is quite inconsistent with the popular theory of mechanical obstruction by stricture.

Still more about the theory of this disease. I have told you that it is a spasmodic disease, not an obstructive one, and if our knowledge of it is to be improved, it will be from studying, not cases complicated by flexion or tumour or inflammation anywhere in the neighbourhood, or in any part of the uterus itself, but by studying simple cases. And simple cases are abundant; they are no rarity. Simple cases are those where an examination discovers no additional morbid condition whatever. These constitute the majority. No disease, tangible or visible, can be discovered, and yet the woman has this violent disease near and during her monthly time. When examination is made with a view to find out

that the case is a simple one, a uterine probe may be passed into the organ. As soon as it advances little more than an inch, it approaches the seat of the disease, the body of the uterus. In a healthy woman the internal os uteri and the whole interior of the body of the uterus are sensitive—that is to say, the touching of them by a probe is disagreeable. In a woman suffering from dysmenorrhœa spasmodica, the pain of touching the internal os is intense, and the pain is aggravated by passing the probe further on and touching the body and fundus; and in every characteristic case the woman at once tells you that that is the pain of her disease. The touching of these parts brings on the spasms, and the removal of the instrument may not be followed by arrestment of the spasms for a few minutes. It is in these simplest cases of dysmenorrhœa that the disease must be studied in order to discover its true nature and cure.

I have already said the disease is frequently complicated by uterine displacement and by uterine hypertrophy; but so far from these having anything to do with the most characteristic form of the disease, the worst cases occur in uteri that are ill-developed, uteri that are small. We have had an illustration of this in "Martha" lately—a case in which our treatment did little good to the woman's dysmenorrhœa. This woman had an ill-developed uterus about two inches long, and acutely anteflexed. I must tell you of another case which occurred not long ago in Edinburgh, and which was seen by many physicians. In her, the dysmenorrhœa was of the intensest kind; but it was without any bloody loss at all. I at one time possessed this woman's uterus, and it measured only an inch and a half in length. Her sufferings were of the most intense kind; and, I may tell you, the most intense form of dysmenorrhœa constitutes one of the most severe and violent diseases that you will ever have an opportunity of seeing. The woman is, while it lasts, almost insensible, sometimes in a state of convulsion or

spasm. She is cold, vomiting, and looks as if she were dying.

To-day I have not read to you any history of cases, because the reading of histories of these cases would not be, as in former lectures on other subjects, the filling up of a picture to give you a better idea of what we are speaking about. To go over all the details of cases of simple dysmenorrhœa would add very little to what I have told you. The women may be in perfect health, except this.

Before I pass on, I must say a little more about the mechanical theory. In the various cases that have been in "Martha" within this last year, we have found no stricture, no contraction of the passage through the womb, except in one case. Especially did we find no contraction when the woman was suffering from the pain; for in order to satisfy ourselves as to the nature of the disease in some of the cases, we passed a bougie into the womb while the woman was in the agonies of dysmenorrhœa, and we found that the passage was clear. This subject of a passage for blood I have no time to enter upon at length; it has been carefully discussed in scientific papers, I merely remark that the smallest passage described, "pin-point os uteri," as it is called, is quite enough to allow a hundred times as much blood to pass as there is any occasion for, or as offers to pass. Contraction, it is said, may be produced by swelling of the passage; but there is no special swelling of the passage, as may be found by examining in the way I have just described. Then another method of explaining the stricture is the blocking up by mucus or a blood-clot. But this kind of mechanical obstruction, even if it exists, does not induce severe dysmenorrhœa; it induces healthy uterine contractions not of a very painful kind, fitted to force on the clot or the obstructing mucus. In an ordinary woman the cervix uteri gives passage to a No. 9 of the male bougie series. The bougies I show you here are just like

the male bougies, only with a different curve. No. 9 generally passes a virgin's internal os uteri without any difficulty. This is important for you to know in connection with treatment. In the contracted cervix that I referred to a No. 7 only could be passed at first. In treating a case of this kind you must find out what is the natural size of the cervix, in order to know how to adapt larger bougies to the case.

Now, how do you treat a case of dysmenorrhœa spasmodica? In the great majority you trust entirely to drugs and regimen; it is only in severe cases that you use mechanical treatment. Medicines for the treatment of this disease are not very efficient. Their great number and variety is a sufficient proof of itself that they are inefficient. Those which are most valuable are laxatives (especially salines), diaphoretics (especially hip-baths and guaiacum). Lastly, there is the treatment by drowning the pain with narcotics and anæsthetics. A familiar treatment, that mothers use, and often very efficiently, is well known. The young girl suffering in this way gets a hip-bath, a little strong gin-and-water hot, and is put to bed. She perspires and goes to sleep, and gets over the difficulty. But I cannot pass from narcotics without cautioning you, for social rather than for medical reasons, as to their use, especially the use of opiates. The disease is a chronic one; it is likely to recur every month for a considerable time, and you are in very great danger of teaching your patient the opium habit, which is a very much greater evil, and, indeed, a greater disease than the other one you are curing. It is only in the rarest cases that you use opium, and recommend it to be used, systematically. In the immense majority of cases, even of those that may be called severe, if you are a wise practitioner you will say to yourself, "Rather the disease than teach my patient the baneful and almost incurable habit of opium-eating." In the course of my life I have known an

immense extent of evil done by this prescription of opium for dysmenorrhœa—evil done not only to the patient herself, but to whole families: evil of very great degree.

Finally comes the mechanical treatment, and this treatment is very successful. I know no drug that can compare with this in its direct utility. I know very few treatments that are more decidedly useful than the treatment of dysmenorrhœa by mechanical means, and yet I recommend you, in the great majority of cases of dysmenorrhœa, not to resort to it. Dysmenorrhœa is a disease which occurs in virgins, and in them you will be most reluctant to use it. In married women who are sterile, you will be, on the other hand, easily induced to try the treatment, in the hope that you will not only cure the dysmenorrhœa, but also at the same time remove the sterility. In regard to the use of this treatment in virgins, I must say a few words in order to guide you as to when you are to resort to it. No rules that I can give you will make up for want of good sense and good feeling on your own part, but I shall give you some hints. The first is that you should, as a rule, not resort to this treatment in an unmarried young woman without the concurrence of three parties—firstly, your own approval; secondly, that of the mother or guardian of the patient; and thirdly, that of the patient herself. All of these should be quite aware of the circumstances and of what it is proposed to do. Then I believe you are justified in recommending it in cases—and they are not rare—where the woman's whole mode of subsistence is ruined. In one of the cases we had in "Martha" the patient insisted upon our doing anything whatever that was at all likely to relieve her, because she could not keep her situation as lady's maid, for she was confined to bed for three days every month by the disease. That was a sufficient reason in that case; and I can tell you that that girl was cured after a few days' treatment in "Martha," and came back to us to testify

her gratitude for being able to keep her place, going about during her monthly period without letting her mistress know that she was ill at all. Then, in other cases, the general health is ruined; and this is not very uncommon. When a woman is laid up and prostrated by a severe attack of dysmenorrhœa every four weeks, her health may gradually give way, and under such circumstances there can be no hesitation in resorting to the treatment. There is another set of cases where the severity of the pain, causing cold sweats and vomiting, is such as to leave no doubt as to the propriety of resorting to any means that offer a hope of cure; and cases of this kind, although rare, are still such as you will all meet with in the course of your practice. In some cases the severity is not so much in the pain as in accompanying phenomena. Lately, for instance, I had no hesitation in recommending mechanical treatment in a young unmarried female, not because the pain was extreme, but because when the pain came she had attacks of suicidal mania; and these attacks of suicidal mania were severe when the dysmenorrhœa was severe, and if the dysmenorrhœa was slight they did not come at all. Under such circumstances no one would hesitate to recommend the mechanical treatment.

Now, the mechanical treatment is very simple if carried on on the oldest of all mechanical plans recommended for the treatment of this disease—that by bougies such as I show you here. The treatment by bougies I recommend to you because it is unaccompanied by danger. The only evil result I have ever seen from it is a temporary perimetritis. It is a treatment, the innocence of which arises from the fact that there is no cutting, and that the instrument is not left in the womb above a few minutes at a time. It is allowed to remain till the pangs of pain which it brings on have passed or nearly so. In order to effect a cure you must go up considerably above a No. 9. You must go up so

as to stretch and distend the internal os uteri; and this stretching or distension of the internal os may require you, in different cases, to reach different sizes. A No. 11 is quite sufficient in many cases; in others you will go up to a 12 or 13—or even above that. These various numbers are not all used in one day, but in successive days, or every second or third day, and generally the whole is effected in a few sittings—say from four to eight. You are not to expect that this treatment will cure every case. I can only tell you that most of the characteristic cases are, if not cured, at least greatly ameliorated. In several cases which have passed through "Martha" we have had failures, and we have had an ordinary amount of success. In one of them the success was remarkable: a single passage of the bougie through the internal os uteri seemed to be enough to dispel the woman's disease.

LECTURE XV.

ON VAGINISMUS.

We have had in Martha Ward recently several cases of vaginismus; and a case of secondary vaginismus forms the text of this lecture.

What is vaginismus? It is one of the numerous diseases that occur in two forms, either primary or secondary. When the disease is primary it is a pure neurosis—that is, we can find nothing visible or tangible to account for it. When it is secondary it is not a pure neurosis; it is a neurosis, but it is a neurosis for which we can in some degree account. This vaginismus is a neurosis of motion, and it consists of spasm. It may be called spasm of the vagina, for that is the part that is affected or changed. The spasm of vaginismus is, so far as it affects the voluntary muscles, a tonic spasm. The voluntary muscles that it affects are the constrictor vaginæ and the anterior part, if not the whole, of the levator ani. One result of the spasm of these muscles is complete closure of the vagina as a passage. This tonic spasm of the voluntary muscles has generally been regarded as the whole of the spasmodic part of the disease; but the affection in a bad case is so severe that I am inclined to think there may be other spasms, of involuntary muscles, concurring to produce the condition of a woman suffering from vaginismus, which I shall immediately describe to you. In the diseases of women there are many spasms of involuntary muscle: the most violent spasms producing the

torture of extreme dysmenorrhœa being well known. It is also known that irritations which produce spasms of involuntary muscles in certain of the lower animals are identical with the irritations which produce the spasms that I am referring to—spasms such as I believe occur in vaginismus. For instance, experimental physiology has shown that irritation of the clitoris produces contractions of the uterine horns; and it is ascertained that irritation of the urethral orifice produces contractions of the fundus of the bladder. It is therefore surely not going too far to suppose that, in the condition of a woman suffering from vaginismus, you have not only spasm of the voluntary muscles, the constrictor vaginæ and the levator ani, but also a painful spasm of the involuntary muscular fibres of the uterus proper.

When a woman is suffering from vaginismus, in a characteristic bad case, pain is produced by touching any of the external parts of generation near the vaginal orifice. This morbid sensitiveness may exist without spasms on touching. But in cases of vaginismus the touching throws the woman into a paroxysm of agony in which the spasms I have described occur. If the irritation is continued there results a state of opisthotonos. The woman is almost, if not altogether, insensible, and her recovery from the condition takes a long time; it may take hours to get over the disorder into which she has been plunged by the irritation that produces the complicated condition called vaginismus in an extreme case. The worst cases are simple uncomplicated cases where the disease is, as I have said, a pure neurosis of motion. A woman, having ordinary vaginismus, has told me that a lascivious dream induces it, the pain awaking her.

I have seen a case of simple vaginismus, not very severe, where the pain and subsequent aching were felt on one side only. On examination, digitally, the spasm could be felt to affect the left side alone; and it was pressure on the left

side that induced this contraction of the anterior portion of the left levator ani.

There are other spasms in these parts which I shall not have occasion to lecture upon here, but which are so closely allied that I must mention them. There is a number of well-authenticated cases of spasm of the levator ani during sexual connection. This is not ordinary vaginismus, but it illustrates the subject. It is a painful spasm of the levator ani during sexual connection, in some cases producing quasi-incarceration of the penis. There are other cases of the same spasm (which I shall describe a little further on) induced by the process of parturition, and obstructing it.

I have given you a description of simple vaginismus, and you can easily understand from what I have said that, except in extraordinary circumstances, it is not discovered until sexual connection is attempted ; it is therefore a disease which is most frequently discovered on marriage, when sexual intercourse is found to be painful and difficult or impossible. If you consider the importance of this conjugal relation you can easily understand that, in a certain important sense, there is no more serious disease than this. It is a disease which involves no danger to life. The disease if sexual connection is not attempted, is as good as absent ; but in the case of married women it is a disease which is exceedingly important, apart from any influence it may exert upon the general health.

This condition of the sexual relations is called dyspareunia —painful or difficult sexual connection. All cases of vaginismus are cases of dyspareunia ; all cases of dyspareunia are not cases of vaginismus. You can easily understand that there are many cases of pain and difficulty in sexual coitus which are not vaginismus. All cases of vaginismus are proved by the dyspareunia ; it is the dyspareunia that reveals the condition, or that leads to the investigation which discovers the condition.

I must say a little more about uncomplicated vaginismus. I have already given you a sketch of the disease; but there is a little more known about it. In a case of simple pure vaginismus I am not aware that you can discover anything in the temperament or condition of the woman in any way to lead you to suspect its existence. The parts, when they are examined, are found to be in perfect health, perfectly well formed. In order to examine them, the patient must be put under the profoundest influence of an anæsthetic. In making the examination you will, in the great majority of cases, discover that the disease is not simple, but secondary —that is, you will find something that more or less completely accounts for the disease. Simple vaginismus is almost invariably accompanied by slightness or absence of sexual desire; indeed, it is frequently accompanied by a negative condition of the sexual appetite—sexual repugnance. Simple vaginismus may come and go. Its coming on appears to be connected with the disappearance of sexual appetite, either as cause or effect. Such women, however, may conceive. It is a well-known fact that it is not necessary for conception that a woman should have sexual desire or pleasure, or that her vagina should be penetrated.

The result of pregnancy illustrates the inveterate nature of the disease. One of the early cases on record, published more than half a century ago, gives an accurate account of the malady. It was a case in which the patient conceived, and had a child at the full time, and was none the better in consequence of parturition. I am myself aware of several cases of this kind; and this physiological or pathological fact has a very clear bearing upon the subject of treatment. In a case of simple vaginismus there is no cure, nothing of the kind, as the result of the birth of a child. Occasionally, in consequence of the great distension and laceration of the vaginal and vulvar orifices, there is a less intensity of the disease; but that is all.

It has been alleged that a woman suffering from this disease is liable to the same spasms of the voluntary muscles during parturition, and there are cases recorded where the parturition has been so difficult in consequence of this spasm as to require craniotomy. This kind of spasm occurs during parturition in women who have not suffered from vaginismus; but it is alleged to be a condition that is to be expected in cases previously affected by vaginismus. I am satisfied, however, that there is no good ground in actual observations for this expectation. In three cases that have come under my own care or notice very lately I have seen no such result. Perhaps the modern difference, produced by the use of chloroform in painful labours, may account for this absence of spasm during parturition under the influence of the anæsthetic, whose value in painful labour has been known for little more than thirty years.

The case of vaginismus that is the subject of lecture to-day is not a case of primary or simple vaginismus; it is a case of a much more common kind, a case of secondary vaginismus. In these, generally slighter, cases you can, by a careful physical examination, discover disease. The disease that occurs most frequently in newly-married women is a painful red spot at the fourchette, occasionally also a fissure there. The red spot is at the anterior margin of the perineum; the fissure may be either in the same place or in the fossa navicularis, or in the external or internal margin of the hymen. When this redness or fissure is touched, the woman can identify it as the source of her disease: she may say, "That is the part," and, on looking at it, you find the condition I have described.

The next most frequent condition observed, especially in newly married women, is vaginitis, either acute or chronic; and this, of course, accounts for the vaginismus without any difficulty. There is frequently, however, and especially in women who have been some time married, a chronic vaginitis

which is in many, not in all cases so affected, the cause of the disease. Cases of severe, though not acute, vaginitis without vaginismus are not uncommon, and there is a case in "Martha" now. There are several other more remote causes which I shall not mention, such as the sensitive caruncle of the urethra.

The case I am about to read to you is an example of a kind of disease that is very far from uncommon, and which, I am sure, has escaped notice in many cases held to be examples of simple vaginismus, but which were really secondary. The disease is, in outward appearance, very slight, and requires thorough investigation to discover it. It consists in the presence of one or more little ulcerations which appear to be healthy. They are generally situated round the orifice of the vagina beyond the hymen, sometimes on the hymen. Under treatment, or without treatment, they heal, and break out in other parts. They are frequently accompanied by little hypertrophies—hypertrophies of bits of the hymen, hypertrophies of the orifice of the urethra. They are intensely tender and sensitive; and, in order to their examination, the deep influence of an anæsthetic is necessary. What is the nature of this disease (which I do not think has been accurately described)? I am at a loss to say. Whether it is allied to eczema or to lupus I cannot decide. I think it is allied to lupus, and the characters that lead me to think so are these: first, the situation of the disease; secondly, the way in which it heals up and breaks out again; and thirdly, the occurrence of these little nodular hypertrophies of the hymen, urethra, and other parts. It is difficult to be sure of cicatrices as the result of healing, on account of the smallness of the sores and their situation on soft mucous membrane. When similar sores are large and get healed, cicatrices are seen.

You are not to suppose that every woman with this disease has vaginismus; the association is not necessary by any

means. A woman with a slight, or even a severe, degree of vaginitis may not have vaginismus. It is only when the pain and sensitiveness are extreme, or at least elicit the spasms, that the disease produces vaginismus. You will find many women with these and other ulcerations—some of them certainly lupus, others not—who have no vaginismus at all, indeed little or no tenderness of the affected parts. This is a very important distinction. No doubt it points to some important textural difference, which I cannot tell you of because I do not know it. Evidently there is a great variation in these diseases, but I know of no difference in the general history or in the appearances on examination, except the sensitiveness and consequent production of a reflex vaginismus. Of this secondary disease the case that I have to bring before you is an excellent example. I shall not read it till the end of the lecture.

The last thing I have to enter upon is the important matter of treatment, In the simple, pure, neurotic cases I am bound to say I know of no treatment that is of decided use. If the case is a slight one, the dyspareunia may be modified by an enlargement or distension of the vaginal orifice, but only slightly modified. Such distension can be easily effected by the surgeon. In a severe case any operation with this view is followed by no benefit. This is what I referred to when I spoke of the evidence in regard to treatment derivable from childbirth. There, surely, you have abundant enlargement and laceration, tearing open of the orifice of the vagina and vulva; and in a bad case of this kind there is no absence of the disease when sexual relations are resumed. In a slight case there may be some improvement, and I have known diminution of the pain and suffering follow the bearing of a child. There are, however, operations which I do not think have been sufficiently tried, and which are justifiable, considering the desperate circumstances of a woman suffering from intense

vaginismus. I think it would be legitimate to try the operation introduced long ago into practice—the cutting of the pudic nerve. I have seen the operation performed, with no benefit.

This individual operation was, in important respects, an unsatisfactory one, and did not contribute to settling anything; but I must add that our knowledge of the therapeutic results of the division of nerves is not, in this matter, very encouraging; and it would not be easy to remove a long portion, say an inch, of the nerve, in order to obviate the failure of this operation from reunion of the separated ends of the nerve-trunk. It has been proposed to remove the most sensitive parts; I regard this proceeding, meantime, with no favour. Operations of this kind have been frequently performed, and declared to be successful. At present I have no doubt that the observations were misinterpreted. It is quite easy to cure many cases of this disease when secondary. I have no belief in the cutting away of the hymen, or that such operations have any influence in a simple, pure, neurotic vaginismus. In secondary cases you are very hopeful in your treatment, and your hopefulness is in proportion to the curability of the discovered tangible disease. In the great majority of instances occurring immediately or soon after marriage, where you have the red spot or the fissure that I have described, time alone, with rest of the parts, is all that is required for their cure. You temporarily separate the parties from one another, and you hear no more about the case. In such examples, if the duration of the disease is prolonged, childbirth will certainly cure, or almost certainly, because in childbirth you have an imitation of a treatment (which is undoubtedly of value in these cases) used in the case of the analogous disease attacking the anus. Cutting through the mucous membrane, or deeper, and expanding the anal orifice, cures the irritability and the fissure of the anus. And so also in these parts. Vaginitis, a common cause of secondary vaginismus, is

generally easily cured. Chronic vaginitis is sometimes very difficult to cure.

In studying the influence of treatment you will keep in mind that the disease is liable to spontaneous variations, and may even disappear, and with its disappearance you will expect the supervention of sexual desire and pleasure.

The case I have to bring before you presents a good picture of one form of the disease, and of a course of treatment that has utterly failed hitherto. But I do not at all despair of this poor young woman being cured of this very painful and distressing malady. The case is as follows:—

E. P., aged twenty-one, has been married for two years. Is strong and healthy, and has menstruated regularly since she was fourteen years of age. Has sexual appetite, but dyspareunia amounts now to complete impotence. Has a slight yellowish discharge. She was admitted to Martha ward, seeking relief from dyspareunia.

(This condition has, in a case I have known, been made the ground of a divorce. You may conceive, therefore, what an amount of misery and evil may result to a woman from this disease, when it amounts, as in this case, to complete impotence.)

On examination there is found ulceration of the lower half of the end of the urethra, which is very vascular and projects like a caruncle. Around the orifice of the vagina, and external to the hymen, are five rounded spots of apparently healthy superficial ulceration, of the size of one or two lines in diameter. They may be touched without producing loss of blood. The hymen is lacerated and its posterior part is thickened, inflamed, and projects. The affected parts are intensely tender. No evidence of syphilitic or gonorrhœal affection is discoverable. The thickened portion of hymen was excised, and the five ulcerations were well cauterized by the thermo-cautery. Twenty-seven days afterwards it was found that three of the cauterized spots were healed; but

anteriorly on the right side were two new little ulcers. There is now a small tubercle just within the margin of the fourchette. The lowest part of the posterior columna rugarum has become slightly hypertrophied. There is no ulceration of the urethra, which is now healthy. Dyspareunia as before. A month after this examination, she, in my absence, came under the care of Dr. Godson, who dissected off the whole of the hymen, and made an incision through the fourchette—a proceeding which has been systematically recommended. After another month she declares herself as feeling better, but the dyspareunia remains as before. The urethra now presents only slight caruncular redness on the left side posteriorly. On the right side of the urethral orifice, and about half an inch distant from it is a new speck of ulceration. On the right side of the vaginal orifice is another ulcer like the former, but somewhat larger, another posteriorly near the fourchette, and still another to its left.

Although treatment has been in this case successful the success has been of a kind not to boast of, because it has always been followed by a reappearance of the disease. The woman is at present feeling better than when she came originally under our care, but she is still suffering from this curious disability.

Before concluding, I may tell you that, in several cases of this ulcerative disease, I have operated by excising the diseased bits, and generally without success—that is to say, the disease has reappeared after the parts first affected were removed by the knife. And what is extraordinary about these cases is this, that in other women you will have apparently the same disease, even much more, without any vaginismus, even without any pain. There are many women who have ulcerations (of which this case is a good example) who are quite unaware that they have any disease at all, who have no dyspareunia and no complaint. In a case of this kind which

I saw lately, operation by the actual cautery was, after a consultation, resorted to, and with complete cure of the disease, so far as the ulceration was concerned; but the woman has now around the orifice of the vagina several tubercles, which are red, not painful, and which indicate what I have already said is my own impression, that the disease is analogous to lupus rather than to eczema, or any other disease with which I can place it side by side.

LECTURE XVI.

ON VAGINITIS.

My lecture to-day is upon vaginitis, a disease which is so copiously illustrated by cases in "Martha" that, although it cannot be expected to strike you, it strikes me very forcibly that it is greatly neglected in medical practice and in medical literature. This arises from two circumstances: it is often chronic and slight; and it often forms a part of a more extensive disease, of which other parts are much more urgent and attract the whole attention of the observer to themselves. If a woman, for instance, has chronic vaginitis and ovaritis, the case will probably be called ovaritis, and there will be a risk of the vaginitis being neglected. If a woman has acute vaginitis and cystitis—which latter is one of the most painful and urgent of diseases—it is likely that the vaginitis will be neglected. If a woman has hypertrophic and ulcerated lupus, she may have also cystitis, vaginitis, rectitis, and stricture of the three canals, and it is likely the vaginitis will attract little attention, the lupus alone being fully considered. The frequency of this disease gives it great importance.

Before I consider the parts of the subject which are to form the chief topic of my lecture to-day, I must get a few statements out of the way. Diphtheritic vaginitis is a rare disease: I have seen it. Erysipelatous vaginitis is a rare disease; and there is a peculiar form of it which is rarer—that with diffuse inflammation of the external cellular coat, causing swelling which almost occludes the whole length

of the passage; and when this ends in suppuration, it sometimes so dissects out the tube of the vagina as to deserve the name of para-colpitis dissecans. Lately I have seen a case of vaginitis with similar inflammation of the cervix uteri, where the disease consists of rounded sloughing phagedænic ulcerations, of one or two lines broad, for whose origin no satisfactory syphilitic account can be found: the ulcers were on the laquear vaginæ and on the cervix. Then an ulcerous vaginitis, rarely ending in adhesions, is described; and I have seen a pustular vaginitis more than once.

Besides these differing kinds there are varieties of vaginitis, as where the disease attacks only parts of the passage, as the laquear, in which case it is very frequently associated with inflammation of the cervix uteri. It also frequently attacks the lower part alone of the vagina, and in that case it is often associated with inflammation of the pudendum. Besides, the inflammation may be of small parts, so that, when the vagina is looked at, it has a mapped, or a marbled, or a mottled appearance. I have seen also a vagina spotted like a Dalmatian dog, as if the chronic inflammation were only around the openings of numerous little mucous follicles, regularly arranged. Again, as in a case which I showed you in "Martha" last Tuesday, the inflammation may so affect the ridges of the rugæ of the vagina that they alone are red, the sulci being pale.

Now for a great matter. Vaginitis may be a local or a constitutional disease. The characteristic acute vaginitis, specific venereal gonorrhœa, or the same disease occurring after marriage, or the same disease occurring after the introduction, or during the wearing, of a pessary, are examples of local—purely local—disease. If the disease is severe it draws the constitution into sympathy with it, and you have a constitutional affection secondary to the local. In vaginitis, as in the analogous gonorrhœa in the male, the occasional occurrence of arthritis is alleged as evidence of a constitu-

tional affection. This arthritis I feel bound to believe in, but I have never seen it.

A large number—indeed, I think the majority of cases—are constitutional in their origin: they exhibit an order the reverse of that which I have mentioned as characteristic of local diseases; it is the constitutional that brings on the local affection, secondary to the constitutional.

In this hospital it seems natural to speak at length on the constitutional origin and treatment of local disease, of which Abernethy made so much. The subject, as he discussed it, was very imperfectly known; and indeed now our knowledge is very deficient. A great deal of the details of what has been said, and some of what I have to say, is mere arbitrary statement; but the great principles are so important that I must enter upon them at some length.

There is an inflammatory diathesis which accounts for the occurrence of local diseases, and this is occasionally well exemplified in lying-in women. Such, while well and tenderly cared for and scrupulously nursed, and after the time of septicæmia and pyæmia are passed, may have a violent attack of pleuritis or pleuro-pneumonia, for which no explanation can be discovered, and which begins and ends as a simple inflammatory disease, but not a mere local disease: it springs from a constitutional origin, and this origin we call the inflammatory diathesis, for want of a more definitely appropriate name. Extraordinary examples of this occur. After a week of healthy recovery, then come puerperal insanity, double pleuro-pneumonia, double nephritis with albuminous urine, and double or right and left parametritis; all beginning and ending as purely inflammatory affections, without any discoverable reference to cold or septicæmia.

When vaginitis occurs as the result of constitutional disease it seldom occurs alone, although it may do so. It is generally accompanied by cystitis, and sometimes by still

more extensive disease. It is generally subacute, as is the cystitis which often accompanies it. Vaginitis and cystitis, each alone, or the two combined, are not rare in old women as constitutional diseases. If they occur in conjunction, the cystitis, being much more painful than the allied vaginitis, may alone attract the observer's attention. Besides being subacute, a constitutional vaginitis is likely to be chronic: it will probably continue so long as the constitutional condition which gives rise to it persists.

What are the constitutional conditions which give rise to vaginitis? Alcoholism is the most important; the next is old age; the next is lupus, or rather the constitution accompanying lupus; and the next is diabetes, and in this case the vaginitis is generally accompanied by vulvitis.

The importance of this distinction of vaginitis into local and constitutional is seen in treatment. A local vaginitis is to be managed almost entirely by local treatment. A constitutional vaginitis will be very imperfectly and unsuccessfully treated if you pay attention only to the local treatment; whereas if you pay attention to constitutional treatment, and even omit local treatment, you will succeed. In cases of this kind striking successes in practice are often seen. You are called to a case of a drunken woman who has, as is not very rare, inflammation of the kidney, bladder, urethra, and vagina, of a subacute kind, and are told by the practitioner that he has tried every medicine he can think of. His therapeutical method, in its highly diluted copiousness, reminds one of the garrulity of little knowledge. In such a case, I say, if you recognize the constitutional origin of the disease, then the line of treatment is at once indicated, and you achieve brilliant success. You make the drunkard a teetotaller, and the vaginitis disappears. An illustration, foreign to the genital organs, may be of use: There is a form of conjunctivitis which is produced by chloralism. Now, if an oculist were treating this in ignor-

ance of its cause, what a failure he would make! He would feel that a disease usually easily cured was beating him, and he might be tempted to try something else, and again something else; whereas, if he knew the cause, he could cure it at once. *Sublata causa tollitur effectus.*

Besides that this disease may be local or constitutional, there is another very important thing to remember about it—namely, that it is frequently part of a more extensive malady.

This is true of local vaginitis, and the more extensive malady is the affection of the neighbouring organs. In cases of acute vaginitis the spreading is by continuity. A woman has venereal gonorrhœa. It is not improbable that she will have endometritis, salpingitis, ovaritis, perimetritis, urethritis, cystitis, and ureteritis, and perhaps nephritis. The whole disease here is local; it was begun by the poisoning of the vaginal mucous membrane. The treatment of the local disease is essential in the case, but the other diseases must be attended to, and they may persist after the cure of the original local affection.

When the disease is constitutional, the vaginitis is, as I have already said, generally only a part of a more extensive malady. I saw a case, for instance, not very long ago, during pregnancy, and another case in an old woman above sixty, where the constitutional disease was alcoholism. Both had purulent leucorrhœa; both had urethritis, which in the old woman was so severe that you could bring out pus from the orifice of the urethra. Both had irritable bladder and albuminous urine, this secretion being in the old woman sometimes tinged by blood. In both the vaginitis was an unimportant part of the disease compared with the affection of the urinary organs; and this latter justly attracted almost the whole attention of the practitioner. In such cases the urine is of low specific gravity; opalescent, and remaining opalescent after standing; it deposits mucus with phosphates and

lithates. The microscope detects pus, bladder epithelium, and epithelium of the ureters. Albumen is thrown down on boiling.

This extended inflammatory affection of the whole genito-urinary organs, of which vaginitis is a part, by alcoholism, is not a disease which stands alone. There is a well-described disease, for instance, which affects the same system of organs, and them alone, in women, called genito-urinary tuberculosis, a good example of which in the post-mortem room is one of the most interesting of sights.

You are not to suppose that vaginitis is a usual result of alcoholism. In those not pregnant and not old a more common result is ovaritis and endometritis, like those produced by fevers. But whereas the ovaritis and endometritis of fever are temporary, the same diseases of alcoholism are only temporary if the alcoholism is also temporary.

An example of another form of constitutional disease producing vaginitis I shall read to you. Here the vaginitis is connected with lupus. I shall not now give you the characteristics of the recurring vaginitis of lupus, because you will hear me read them in this report; and I ask your attention to the fact that the vaginitis was rapidly improved while the patient was under our care. This form of vaginitis is often easily cured, but it is very liable to relapse; for I have classed it as of constitutional origin; and who will remove lupus from the constitution? The woman has myxœdema or cretinoid disease; she has lupus minimus of the orifice of the urethra and around the vaginal orifice; and she has diabetes. She came to us to be treated for vaginal discharge.

E. K., aged forty-one, married twelve years; has had two children, no miscarriage; last child born ten years ago, husband having been absent since then. Says she measured eighteen inches in girth at the waist before her last pregnancy; she now measures thirty-eight inches. Hands and

feet were then small and fine. Gradually, during the last ten years, she has grown weaker and bigger. Hands, feet, face (especially lips and nose), and neighbourhood of umbilicus, have become thickened and coarse. Hands most affected, being thick, corrugated, clumsy, like those of a labourer, with the nails coarse, dirty-looking, and flattened. She has lost power to a great extent in arms and legs, being unable to grasp anything firmly, and finding it tedious and difficult to thread a needle. She cannot see, hear, smell, or taste as formerly. Ophthalmoscopic examination reveals nothing abnormal in the eyes. For the last three months she has been passing large quantities of water, and has not been able to retain it above a minute after the desire to urinate is felt. The quantity now passed is about a pint at a time; it has a specific gravity of 1042, and contains much sugar. On successive days she has passed $5\frac{1}{2}$, $6\frac{1}{2}$, 8, 6, 4, $7\frac{3}{4}$ pints. The fourchette is entire; at each side, and arranged around and external to the proper vaginal orifice, are dark-red and tender patches. The vestibule between the clitoris and urethral orifice is red and pitted. The posterior half of margin of the urethral orifice presents a prominent, caruncle-like, ulcer with everted edges, not extremely sensitive. The cervix uteri contains an opaque (not yellow) mucus. The vagina has a measly-looking, mottled red, surface, painted over with copious thin green pus; its surface is smooth, and no rugæ are seen. She has been treated for a few days with a vaginal injection of black-wash, and already the vaginitis has nearly gone, the surface looking scarcely redder than natural—not smooth and glazed as before, but presenting rugæ, and the pus being laudable.

Epoch, or age, here produces, not different diseases of the vagina (such differences as I have illustrated in another lecture), but it produces vaginitis of different kinds. You have no vaginitis in childhood. I, at least, have never seen any, except of the lower part adjoining the hymen. Then,

during mature life, you have the characteristic acute vaginitis, the venereal gonorrhœa, or a like disease, which may owe its origin to perfectly pure sexual intercourse. An acute vaginitis is not to be so designated, unless it has the combination of characters necessary to entitle it to that name. You must have intense inflammation rapidly coming on after the cause has acted, coming to a climax in eight or nine days, and then rapidly fading and going away altogether, or becoming chronic; and you must have, during the height of the disease, a copious flow of laudable pus.

The vagina in this disease generally presents a red, raw-looking surface, beneath which there is little œdema, the rugæ not being obliterated. It is sometimes punctate, which probably arises from the injection of papillæ, and it is often granulated from the same cause.

The vaginitis of old age is generally subacute, and a similar disease is not rare during pregnancy and in the puerperal state. Rarely does the vagina, when inspected, present the same appearance as in the acute vaginitis of youth. It is more frequently smooth, having a glazed appearance and feeling, the rugæ being obliterated, and reappearing as the disease is cured; and sometimes you see areas over which the mucous surface seems to be destroyed, and these bleed readily, especially when touched. In many of these cases you are consulted not for vaginitis, but for so-called menorrhagia, which the woman supposes she is suffering from; and, as you know, this is an alarming symptom in old women.

This disease, especially in old women, leads to "garrulitas vulvæ." The vagina probably secretes air, and the woman may be extremely annoyed by passing it from the body. This is not the only explanation of passing air from the vagina, but it is the only one I at present mention; and I may remind you of the disease called "vaginitis emphysematosa." In the subacute vaginitis of old women the

bladder is very often simultaneously affected. The pus is generally thin and green. It may be very scanty, but is sometimes extremely copious. Although the disease may depend greatly upon the permanent constitutional influence of senescence, it is upon the whole amenable to simple treatment. The vaginitis of the old is probably the cause of those common, partial, thin-edged vaginal strictures which are so frequently found high in the passage.

Now, besides these two forms of acute vaginitis, the vaginitis of mature life and of old age, you have chronic vaginitis.

Chronic vaginitis of youth occurs in various forms. There is a chronic vaginitis in which the vagina is hard and small, its rugæ well seen, but yet evidently swollen, œdematous, and with either no secretion or with the rugæ painted over by an old grey-white accumulation of sordid epithelial detritus. This kind of vaginitis is not rare, and it sometimes escapes notice, because, although it may be connected with vaginismus, it often produces no symptoms. Of this form we had a case in "Martha" a few days ago. This, which may be called dry vaginitis, has its analogue in a disease of the deep cavities of the nose, which I have suspected as producing peculiar headache and giddiness, and which is assuaged or cured by the same soothing remedies as act on the disease in the vagina. Another disease I may mention, remotely analogous to this. Many of you remember the last ovariotomy performed in "Martha," and you must have seen that woman's uterus pulled out of the pelvis, red and having the appearance of a fresh section of raw beef. That was a case of dry chronic peritonitis without any secretion or symptoms. It did not interfere with her good recovery. I spoke of this condition in my lecture on "Hydro-peritoneum."

In some cases the cervix uteri is diseased as well as the vagina, and I shall read an example which occurred in

"Martha" lately. In this we had, probably as a result of an acute vaginitis, a chronic vaginitis accompanied by cystitis and urethritis, and only imperfectly cured after long perseverance.

S. H., aged twenty-seven; general health good; has been married more than a year, but has not been pregnant. Has been under treatment, in another ward, for some months, for chronic catarrh of the bladder. Had an abscess in a labium majus, and yellow vaginal discharge, before admission to the hospital. Her urgent symptom is frequent calls to painful urination. Private parts so tender as to necessitate the use of chloroform in most of the examinations. Vulva, vestibule, hymen, intensely red. Bladder hard, exquisitely tender, contracted so as to have only two inches from orifice of urethra to fundus. Laudable pus flows from vagina, and can be expressed from urethra. Speculum shows vagina to be red; rugæ not seen; surface not granulated, but has an œdematous appearance. Uterus healthy. To have hot hip-bath and morphia suppository at bed-time, and a copaiba mixture several times daily. Bismuth powder lotion twice daily per vaginam. Milk diet. Saline laxatives when required. Not to get out of bed. Under this treatment she gradually improved. Subsequently the bladder was daily washed with an acidulated solution of sulphate of quinine, two grains to an ounce; and still later with subnitrate of bismuth suspended in water. After three months of diligent treatment, the vaginitis and urethritis were cured, the bladder had greatly increased in capacity and was less irritable, but the urination was still unnaturally and distressingly frequent.

The chronic vaginitis of old age, as I have already said, is often accompanied by pruritus, and frequently causes alarm by bleeding. Here is an example of it, in which we have, besides the vaginitis, incurable hypertrophy of the rethra.

E. S., aged forty-seven, has been married for twenty years, and has had three children; no miscarriage; the last child born twelve years ago. Catamenia began at thirteen years of age, and continued (with some irregularity the last twelve years) till a year ago, when they ceased. For nine years has had a green watery discharge from the vagina, which is, at least sometimes, fœtid. Coitus very painful for the last two years. Her appearance is unhealthy. Her urine is loaded with lithates. The urethra is hypertrophied, hardened, and feeling like a small finger. Except slight redness, it presents no unnatural appearance to the eye. It is tender to touch per vaginam and on using the sound. The bladder and womb are natural. The vagina has a polished, slightly reddened, tender surface, which readily bleeds at various points when touched. Glycerine cotton plugs were used for three weeks, and for a month she had twice daily an astringent lotion of ten ounces of tepid water with thirty grains of alum, and as much of sulphate of zinc in solution. She was discharged greatly relieved, yet her disease was not quite cured.

I have mentioned many forms of vaginitis, and one important practical subject I must discuss briefly in connection with the forms of this disease. Is it, in any special case, venereal or not venereal? You will, in practice, often be asked this question, and I advise you never to answer it explicitly. You cannot decide absolutely whether a case is venereal or not. At one time it was supposed that the discovery of trichomonads, or a leptothrix, or a vibrio, would decide whether it was venereal or not. But this is now given up. I have seen gonorrhœa which was certainly not venereal bear every character of the ordinary venereal disease. I do not say that there is no distinction, but only that the distinction cannot be made out by the practitioner so as to justify him, from his own inquiries into a case, in giving a decided opinion on the subject. Meantime,

the distinctions of venereal gonorrhœa are simply marks of severity. It has been said that venereal gonorrhœa is infectious, while simple gonorrhœa is not; but I have seen every character that can be predicated of the one occur in the other, as I said before, including infection.

What are the characters that make you suspect that a vaginitis is of venereal origin? It begins within a few days—generally two or three—of the infection; it is generally severe, and runs an acute course; the secretion of pus is copious, beginning about the third day of the inflammation, and remaining copious for about a week or nine days. The vulva is generally affected, so that the woman has more or less difficulty in walking; and, the vulva being affected, the inguinal glands are liable to be affected, and you may even have bubo. The urethra is affected, and also the bladder; there is liability to ovaritis and to peri-oophoritis; and there is the almost certain infection, not only by sexual intercourse, but by the matter touching any mucous surface, such as that of the eye.

I have little time to make remarks upon treatment, and indeed the treatment of this disease is illustrated by the cases I have read, and it is so well described in every text-book that it would be only waste of this day's time to enter upon it. It must be based upon a careful diagnosis, including the diagnosis of the local or constitutional origin of the disease, the diagnosis of the simplicity of the affection, or of its complication or extension to other parts.

The acute disease is treated by diet, and purgatives, and baths, and rest. Locally it is treated at first by emollient injection, such as that of decoction of poppy-heads; and afterwards by other injections, such as that of dilute liq. plumbi diacetatis; and at the end by injections of very dilute astringents, as of the sulpho-carbolate of zinc. All these injections are made with some kind of syringe. The

injection is of about ten ounces, and it is passed slowly through the vagina. It is good treatment, in a tiresome case, to apply weak, or sometimes strongish, solution of silver nitrate to the vagina, and that is done by a blunt-pointed glass syringe. You pass something like an ounce into the vagina, through it.

The chronic disease is treated in many respects as the acute or subacute, only you place more reliance upon the use of powder suspended in water—such as the white bismuth. An excellent remedy is a weak solution (five or six grains to the ounce) of sulpho-carbolate of zinc; and I shall conclude the lecture by reading to you a case of simple chronic vaginitis with smooth glazed surface, which, after we were afraid it would prove rebellious to treatment, was quickly cured by the use of the hot douche. This is the injection into the vagina of a large quantity of water at a blood heat or some degrees higher; and the water is injected, for several minutes, with considerable force, which may be estimated by my telling you that it will throw it four and a half feet high. This powerful remedy proved of curative value in the case I am to read to you.

M. F., aged thirty-seven, has been married eight years, and has had no children. The catamenia began at thirteen years, and were regular and somewhat painful till recently, when they have been delayed sometimes to the extent of two weeks. For about nineteen months she has suffered from pain in the situation of the vagina, yellow discharge, painful coitus; and in the earlier period of her illness she had painful micturition. She has slight pain on pressure over the right kidney. No pain on defæcation. The pain in the vagina comes in paroxysms several times a day. She says that the yellow discharge has latterly diminished considerably. The finger finds an unnatural smoothness of the vagina. The speculum reveals no disease of the cervix, but

the vagina is smooth, slightly redder than natural, and painted over with yellowish muco-pus. After the failure of long-continued ordinary treatment as an out-patient, and for a short time in "Martha," she was ordered to have twice daily the vaginal douche of hot water at about blood heat for some fifteen minutes each time. Of this treatment she quickly felt advantage, and after five days of it she left the hospital quite well. The vagina had lost its œdematous smoothness, and was pale and rugous in the natural manner.

LECTURE XVII.

ON INFLAMMATIONS OF THE PUDENDUM.

The diseases which form the subject of my present lecture compose a natural group, of only some members of which have we had examples in "Martha" recently. I call them inflammations of the pudendum; but they are often called inflammations of the vulva, and sometimes of the vestibule. The words "vulva" and "vestibule" imply only areas, whereas the word "pudendum" (or pudenda) implies parts, and is therefore preferable.

I shall get over a large subject to-day, for I intend to say almost nothing about symptoms or about treatment; because, in the case of the inflammations of which I am to speak, to go over the symptoms and treatment would be to repeat a thrice-told tale. The diagnosis, indeed, I shall pass over briefly. In general it is very easy; and in my next lecture on cysts and tumours of the pudendum I shall make some remarks on diagnosis which are applicable to this set of diseases.

Inflammation of the labia is almost certainly the cause of one form of atresia that is seen in infants, the labia majora cohering; that is a disease which, being intra-uterine, we cannot, of course, see, and we know it only from its results. The labia majora are liable in children to noma, a disease which I have seen affecting the mouth, but which I have never seen affecting the private parts. I might here make some interesting remarks upon the mutual pathological

resemblances of the face and the ano-vulvar region, a subject which is well illustrated by this disease and lupus, and several other morbid conditions which specially affect these two parts. Follicular vulvitis, or vulvar folliculitis, is said to be a common disease, but I have never seen a good example of it. I am familiar with it from the descriptions and pictures in books; but I have never seen it in Nature, and therefore shall say nothing about it. Erysipelas of the pudendum is not uncommon. It is extremely dangerous in lying-in women. Sloughing of the private parts—a condition in some cases resembling hospital gangrene—occurs in infants after fevers, and also in women after delivery. When it does occur, the patients generally die, though I have seen them recover after extensive destruction of the private parts. In such cases you have either complete cicatricial closure of the vagina, or partial closure—that is, stricture of the external orifice of the vagina—as the result of the healing up of the great raw surface left by the separation of the sloughs. You must distinguish these great gangrenes from what may be called healthy sloughing, which is not at all uncommon after what is an ordinary, and quite natural, delivery. If you examine numbers of women after delivery, especially primiparæ, you will often find small dark-coloured sloughs of the hymen, or of tags of mucous membrane torn up at the orifice of the vagina, or even of a pile at the anal orifice. Such sloughs, as I say, are not at all rare, and have little clinical importance, though great clinical interest.

Passing over these various diseases, I have said that the group on which I am lecturing to-day is of great interest. It exemplifies admirably the influence of epoch in establishing the tendency to disease; different diseases affecting different epochs of life. I use the word "epoch" in place of the word "age," which I should otherwise naturally employ, because this latter is misleading; suggesting that what I refer to is the influence of growth and adolescence or

decrepitude and senescence. No doubt adolescence and senescence have great influence; but, entirely apart from this, there is an influence exerted by epoch.

The little I have to tell you very well illustrates another important point in your education. Nothing facilitates study more than the change of mere knowledge into understanding, improving mere memory by adding to it varied intelligence concerning the subject remembered. Few people have any difficulty in remembering a thing which they understand. If you, in addition to being told a thing, see it, still further if you feel it, you are much more likely to remember it than if you are merely told it. Herein is an advantage of clinical study over systematic lecturing. But if, in addition to seeing and feeling, you have other ideas associated with a matter, which constitute a wider and more profound scientific knowledge, you can scarcely forget it.

Characteristic vulvitis (infantum) is a disease confined to childhood; not vaginitis, which is a disease of maturity and advanced years. Characteristic acute vaginitis may be said to be peculiar to maturity or the child-bearing period of life.

In mature life you have simple acute inflammation of the labia, and of the glands of Cowper, and of their ducts —diseases which you never see either in youth or in old age.

Then you have another important epoch—namely, the recurring periods of pregnancy and the puerperal state—an epoch marked by hypertrophy and œdematous conditions of the labia not seen at other times.

In old age you have a series of inflammations characterized by the symptom pruritus, which gives its name to the morbid conditions consequent upon inflammations of a chronic kind affecting chiefly the skin and mucous membrane; erythema or dermatitis, generally with hypertrophy, and often with eruptions.

There are two diseases which are so rare that I cannot

classify them according to epoch at all—namely, progressive gangrene and progressive suppuration. I give them the name "progressive" because they have analogies with diseases in the lower animals that are so named, and are very much better known, for evident reasons, than are the analogous diseases in woman. In the lower animals these are attributed each to its special bacterium; and, in the present state of science, it is natural to ascribe each to its special bacterium in woman also—one species causing gangrene, another suppuration.

Progressive gangrene is a disease that I have only seen in one case, and I know of no other. It occurred in a lady who was suffering from perimetritis, and the progressive gangrene came and went while the perimetritis was going on; it was an interlude in the course of a long perimetritis with suppuration. This case was rare in its issue, for the patient recovered and lived for many years. The skin is not primarily attacked as in erysipelas or in the sloughing of the labia which you see in infants and sometimes in lying-in women. It is a disease known as occurring in the scrotum of males, and it used to be supposed to depend upon infiltration of urine; but it has been shown to occur independently of any disease or injury in the urinary passages. It occurs around the rectum and also in the neck, and it has received the names of "areolar inflammation and sloughing," "inflammatory œdema," and also "sloughing cellulitis." I have given it the name progressive gangrene. In my case, with slight access of fever, there appeared much swelling chiefly affecting one side of the perinæum. The skin over this swelling was of a dusky leaden colour; and the swelling itself could be felt, per vaginam and per rectum, to pass high up into the excavation of the pelvis; it was not very tender and had a boggy softness. When the knife was put into it, matter did not escape, but an ugly ichorous brown serous fluid, and after the escape of this there came at in-

tervals plenty of sloughed cellular tissue, and lastly plenty of pus. The destruction of cellular tissue was so great in my patient that I thought she could never recover the retaining power of her anus and the proper use of the lower part of her rectum. Before the healing commenced you could pass your finger round the great sacro-sciatic ligament standing as a bare beam in the midst of the discharge. The patient was young and otherwise of sound constitution, and it was not long before, upon a superficial examination, you would have discovered nothing wrong but a cicatrix, and she had a perfect use of all the parts in that neighbourhood.

Progressive suppuration is a commoner disease, of which I have seen several examples; it occurs in old and middle-aged women; and I have not seen it in young girls. It is a cold abscess, or rather a nearly endless series of cold abscesses, which mature slowly and burst, or are opened and leave behind them very little cicatricial deformity. Before one is closed, or soon after, another appears; and so it goes on for months, until in some cases the general health of the patient is completely destroyed; yet I have never seen it prove fatal. The worst case I have met was that of a lady who came to me from America with this disease. She had an ever-recurring formation of cold abscesses in some part of either labium majus. She stayed under my care for several months, and she left for the South of France by my advice, no better than when she came to me. I know that she recovered; but you will understand from this history how tiresome this disease is. It may recur after appearing to be cured. The only special treatment which I have seen to be apparently beneficial is the inunction of mercurial ointment. One old lady asserted that she was cured by this applied for a few days over the whole vulva, and that without any hydrargyrismus being induced. This disorder is not pyæmic, because the abscesses are confined to one part; and

it is not dependent upon disease of lymphatic glands, for there are no glands in the part affected. A somewhat similar disease everyone is familiar with, occurring in the axilla, where, however, it is connected with the glandular structures of that region. The same is true of a disease somewhat analogous, the submaxillary suppurations, which leave great cicatricial deformity. The disease is not, however, without closer analogues: there is a disease of children, constituted by the same kind of suppuration, in the throat, which I have more than once seen fatal,—not the mere retro-pharyngeal abscess, which I have no doubt you have heard of. Another analogous disease occurs in the mamma, and is one of the most tiresome maladies that I know; the repeated healings and renewed suppurations going on until every part of the areolar tissue in and around the gland has been affected. This I have seen both during pregnancy and after delivery.

Passing over these two important diseases, I come to the vulvitis of childhood. This is a disease characterized by little swelling of the otherwise healthy pudendum, with redness, sometimes with impetiginous eruption, sometimes with a red papular spotting. A laudable, rather viscid, pus covers the whole surface. It is simply an inflammation affecting only the external parts, including the hymen. I have never seen a case complicated by vaginitis, except of the very lowest part of the passage adjoining the hymen. The inguinal glands may be a little enlarged and tender: I have never seen anything to be called a bubo. I have said this is a disease of childhood, and the only exception to this that I have seen was in a very young strumpet whose age was certainly not above sixteen: in that woman there was the ordinary virulent gonorrhœa, but, along with that, her vulva was inflamed, and secreting pus exactly as in the characteristic vulvitis of young children. The vulva is often swollen and tender, and so are the inguinal glands, in

venereal gonorrhœa, but not secreting pus as in the young girl referred to.

This disease used to be believed to be the result of sexual impurity or violence; and you should keep your eye open to the possibility of this, and look for contusions. If injury is recent you look for semen on the person or upon the linen of the child. It is certain that, under the influence of supposing venereal violence to be the common cause of the disease, a great number of unjust punishments have been inflicted upon men.

Vulvitis of children generally occurs as a consequence of cold, and it is liable to recur. It is generally easily cured, and of its treatment it would be useless to say anything, so well is it given in systematic lectures and text-books. It occurs as often among the rich as among the poor; and I mention this, because in almost every book you are told that dirt and worms are two chief causes of it. Dirt is very common, and I have found no reason in my experience for thinking that dirt produces it more frequently than cleanliness. In the same way it is said to be due to worms. Now, while I have seen many cases of worms without it, I have never seen a case of vulvitis that I could ascribe to worms. And I believe that this is an illustration of the injurious tendency to repeat what has been said before. Because one author of repute says a thing, every one repeats it. Everyone of you has been taught that worms cause convulsions in children: but, were I lecturing on the subject of convulsions, I should make the same sceptical remarks on that head. I never saw a case of convulsions that I could reasonably trace to worms.

The only inveterate case of vulvitis in the infant that I have seen was in a child remarkably well cared for; it was repeatedly cured with lead lotion, and at length we traced the disease as spreading from one of the ducts of a Cowper's gland, which the treatment did not affect beneficially.

Affections of the vulvo-vaginal glands of Cowper are important, and must be discussed with some care. Abscess round the duct of a Cowper's gland has the same physical characters as the cyst of this duct which I shall describe in a subsequent lecture; and this is the only reason why abscess of the duct of Cowper's gland is described under that designation. If you look at the pictures of cyst of this duct, and of abscess of the posterior part of a labium, you will find that they are all identical. There are no means of diagnosing abscess of the duct from abscess of the posterior part of the labium.

Inflammation of the glands themselves is not rare. Chronic inflammation with enlargement of the gland I have seen, and also without the enlargement; and the cases have presented, as their chief symptom, painful sitting. When you have this disease you feel a little lump the size of a large pea, if the gland is not hypertrophied and indurated; but if hypertrophied the lump may be as big as a small chestnut; and it lies between the posterior pier of a labium and the adjoining tuber ischii. Of that inflammation and its treatment I shall say nothing, because I know nothing special about it. It sometimes goes on to abscess of the gland of Cowper, and that is well worth noticing. If you look into books on the diseases of women you will find this abscess confused with abscess of the duct. Abscess of the gland is depicted just as a cyst of the duct or an abscess of the duct is depicted. This is an error; or, at least, it was not so in he cases that came under my observation, for in them there were swelling and deformity between the posterior part of the labium and the adjacent tuber ischii. The two cases of this disease which I remember best occurred in otherwise healthy virgins; in one of them as the result of exposure to cold, for she was taken ill after coming from a ball in a stormy winter night. In both these cases the matter discharged itself very imperfectly through the duct of the

gland. In one case the disease lasted for years, and the woman was supposed by various physicians to have ulceration, or vaginitis, not what was really the case. This disease I must speak of only from the examples I have seen, and they point out that the opening of the abscess in the situation of the swelling between labium and tuber ischii is not sufficient. In both my cases pus was evacuated by this method, but the disease was not thereby cured; suppuration continued, and it was only after laying open the whole duct of the gland by a large incision that healing up was obtained. The duct of the gland was easily found, because in both it was dilated, and a probe-pointed bistoury could be passed along and the necessary incision easily made.

Another very important disease of this part is gonorrhœa of the duct. Of this disease I have seen three examples, and in only one of them had we any doubt as to whether it was caused by venereal gonorrhœa; in two there could be no doubt. In all of them, after the vaginal disease was cured, the gonorrhœa of the duct persisted. The disease was easily diagnosed by pressure upon the duct making matter flow from the little orifice near the insertion-margin of the hymen; and it was evident in all of them that the duct was dilated, for you could make, and I did make, as a demonstration to students, at least two or three drops come in successive pressings upon the course of the duct. These cases were treated upon ordinary principles. One appeared to need only the passing of a large probe to cause its cure; in one of them it was necessary to inject solution of nitrate of silver by means of the apparatus used by oculists for injecting the lachrymal duct. These diseases may appear to you to be trivial, and in a pathological sense they are so; but in another light, that of the patient's interest, they are of great importance.

The diseases of the vulva in pregnancy are congestion, hypertrophy, inflammation and induration, and œdema of the

labia majora, all with tenderness or pruritus. Chronic inflammation with induration is often a hard inflammatory œdema, but sometimes you have a soft œdema—that is, one which pits on pressure; and this soft œdema is evidently connected with a degree of inflammation, although not always. It is worth while here to mention to you that in multiparæ you have sometimes œdema, rarely enormous, of the lower part of the abdominal flap, and in such cases you have œdema of the labia;—conditions not uncommon in cases of large abdominal tumours; but I do not describe these, because they are not inflammatory. I cannot, indeed, enter at any length upon the inflammatory diseases of the pudendum of pregnant and lying-in women. They are frequently associated with similar conditions of the vagina. They bear great resemblance to the diseases of old age, except that they are more certainly connected with vascular congestion, more temporary in accord with the passing pregnancy, and more amenable to treatment by laxatives and horizontal rest.

A disease exactly resembling the acute ulcerous stomatitis of children, in its appearance and history, sometimes attacks women, affecting the vulva. I have seen it in pregnancy.

In lying-in or recently delivered women, abrasions of the nymphæ or of the vestibule nearer the orifice of the urethra, giving rise to irritable bladder, are important, not so much on their own account, as because they are liable to mislead the practitioner into thinking that something is wrong with the bladder. They often cause dyspareunia, and they are easily cured.

The peculiar inflammations of old age depend generally upon vascular weakness, not rarely on some morbid vaso-motor condition. They are generally clubbed together under the name of their great symptom pruritus—itching—which may vary from being a most trivial irritation to agony; producing at times so much suffering as to put a woman beside herself,

generally at night after going to bed. The disease is characterized by a great variety of conditions. Almost invariably you have hypertrophy of the labia majora and minora as well as of the carunculae myrtiformes at the orifice of the vagina; and the disease also frequently affects the vagina itself. The skin is red and may present a parchment-like appearance, produced apparently by frictions which the woman makes to relieve herself. This parchment is seen on the inner surfaces of the labia as well as externally. Frequently there is a scaliness of the surface, which is more like ichthyosis than psoriasis. With this disease there is often intertrigo of the groins and hips. This disease is sometimes produced by discharges from the vagina. Acute attacks often result from diabetes, which acts in two ways—first, by the sugared urine irritating the skin; and second, by the diabetic constitution producing acute (not suppurative) inflammation, with enormous hypertrophy, and sometimes with herpetic eruption. Herpes may accompany diabetes, not merely on the inflamed labia, but also elsewhere. You may have a regular herpes elsewhere, and a herpes-like eruption on the labia as well, or none on the labia. The herpes shows that the disease is not a mere local one, but a nervous disorder. In three of the last cases of diabetes in women that I have seen, there was, besides inflamed labia and pruritus, in one, herpes of the right forehead; in another, of the left side of the face and mouth, including the tongue; and in the third, there was the ordinary herpes zoster of the right side of the chest.

Slighter inflammations of the pudendum in old age differ from the vulvitis of children in this—that they are occasionally produced by dirt. At any age you may have the irritation aggravated by the peculiar lice of this part of the body.

The chronic inflammations of old age are very difficult of treatment. They may be alleviated, but are seldom completely cured; and in this respect they differ from the in-

flammatory affections of previous ages. Of course, if you find any cause, such as diabetes, or vaginal discharge, or constipation, or piles, you pay attention to that. If the disease is merely local, you are satisfied with local treatment; and this may be varied in many ways. This variety is of itself an evidence that no method of treatment is often effectual. When there is a disease for which there are many cures, you may be sure that all of them are of limited value or limited extent of utility. The applications used are either lotions, powders, or ointments made with fat or vaseline or glycerine. Lotions are the most useful, and none better than the common one of oxide of zinc and highly diluted hydrocyanic acid; another much used is the old-fashioned black wash. Lotions with decoction of poppy-heads or with muriate of morphia are also used; and you may also try belladonna in them. Sometimes a fomentation of tobacco infusion with borax is comforting. Painting with weak solution of nitrate of silver or with compound tincture of benzoin is sometimes valuable. Dabbing with concentrated solution of boracic acid is worth mentioning. The ointments most used are those of boracic acid, bismuth, zinc, and hydrocyanic acid. Powders of starch, chalk, and bismuth are sometimes useful.

Great perseverance in the treatment of cases of this kind often rewards the practitioner; but another kind of persevering in well-doing on the part of the patient is essential, and forms an important part in the instructions of the medical man—that is, not to scratch or rub. To abstain is not impossible, and a courageous abstinence will be rewarded. If scratching is persisted in, the disease is made inveterate, incurable; or the repeated irritation may lead to what has been called oozing tumour of the labium, and to malignant epitheliomatous growth.

LECTURE XVIII.

ON TUMOURS AND CYSTS OF THE VAGINA AND PUDENDUM.

I DO not propose to say anything to-day about the most important tumours of the vagina and pudendum—those, namely, which are produced by cancer, lupus, elephantiasis, or caruncle.

The vulva is the seat of many forms of wart and non-contagious molluscous growths, which I merely mention. The finest specimens of warts are, you know, venereal.

Fatty tumours of the vulva are not very rare. I have seen one remarkable for its size, which was that of an enormous orange, and for its being pediculated like a polypus; it was removed without any trouble.

Pedunculated cysts are rarely found on the vulva; sometimes attached to a nympha: and I show you a specimen from the museum.

In the vulva you sometimes find polypi hanging out of the vagina. These, of course, have nothing to do with our present subject. In like manner you, very rarely, have a polypus hanging from the bladder into the vulva, the stalk passing through the urethra. There is another rare affection, of which I have seen only one example, which I shall mention now. It was a fibrous polypus of the urethra in a young woman suffering from gonorrhœa and intense strangury. The case was complicated by the presence just within the urethra of a fibrous tumour, which was red and acutely inflamed; it was of the size of a boy's marble, and

had a thin short pedicle attaching it to the middle of the urethra; it was easily removed. This fibrous polypus gave no trouble till the gonorrhœa began, and then it appeared to be the cause of a part of the intense severity of the strangury arising from the gonorrhœal cystitis of which she was the subject.

Fibrous polypus of the vulva is a rare disease; I have never seen one, but I have read of several. Sometimes they are very large: they have indeed been described as being so big as to hang down nearly to the knees. Fibrous tumour of the vulva, not polypoid, I have seen examples of. In one young woman the tumour was the cause of a good deal of pain; it was situated near the posterior extremity of one labium majus, and was of the size of a large chestnut. Another case of fibrous tumour of the vulva occurred recently in "Martha"; I shall read it to you:—

"L. N., aged thirty-four, has been married for fifteen years and has had seven children; the last twenty months ago. She had been delivered by instruments three times, and had had flooding post-partum three times. Catamenia began at fifteen, and have been regular, except that since last confinement they have appeared every three weeks. Has for five years had pain in the private parts, which has been aggravated lately. For three years she has felt a lump in the left labium, and has generally a little pain in it, sometimes a sharp shooting. A fibroid of the size of a small chestnut can be felt in the highest part of the left labium majus, at the side of the urethral orifice, deforming the labium by its projection. It is not tender, freely mobile, densely hard. It was easily enucleated. On section it was found to be a dense fibrous mass, having in some parts a cartilaginous appearance."

Fibrous tumour of the vagina and fibrous polypus of the vagina both occur, but they must be very rare, for I have not seen either. They produce symptoms closely resembling

those of fibroid of the uterus, including discharge and bleeding, and they are treated according to the same principles—indeed, in the same manner as fibrous tumours of the uterus. Of course they are proportionally much more often subjected to surgical treatment, and especially to removal, because of their more easy accessibility.

I now come to consider the subject of cysts of the vagina and pudendum; these cysts are naturally, in the present state of pathology, referred entirely or almost entirely to retention. I have been lecturing lately upon the subject of retentions; and these cysts are undoubtedly, at least in the majority of instances, cases of retention—the retention of the natural secretion of the cyst, which is closed.

What are the potential or natural cystic cavities in this region? The most common little cavities are the mucous and sebaceous follicles, and they may be closed and become replete and distended. You have also occasionally remnants of the ducts of Gärtner, which may come down by the side of the vagina. Of retention in these ducts I shall say nothing more, because not a single case is known in which the accumulation of fluid has been proved to be situated in a dilated duct of Gärtner; it is merely a supposition. Then you have the most common retention cysts from closing of the aperture of one or of both Cowper's ducts—the ducts of the glands of Cowper, or Bartholin, or Duverney, or Huguier. The closure of these ducts is not at all rare, and I have no doubt that, in the course of even a general practice, you will see cases of it. Then you have peritoneal cysts; and I shall speak presently of the cyst of Nuck, which occurs in the groin. Besides these, you have cysts which I cannot avoid mentioning, but which do not come into the category of proper cysts of the peritoneum; they contain fluid or bowel or omentum, and are, like ordinary herniæ, not closed cysts, but morbid peritoneal sacs having communication with the general peritoneal cavity. I shall speak of them again.

Before I advance further I shall enter on the subject of diagnosis, in order to exclude it afterwards. You may have in the vulva a cystocele projecting through the orifice of the vagina, by which it may be strictured or grasped firmly. Such a cystocele may be much distended, so as to have an extraordinary likeness to a cyst. The cystocele may be entirely within the vagina, the bladder hanging into the vagina in a bag-like form resembling a cyst; and cases are on record in which it has been taken for a cyst and punctured, when the treatment ought to have been to empty it by a catheter and then to support it. This occurs chiefly during parturition.

Procidentia uteri is not a cyst nor anything like one, but I have known several cases of cyst diagnosed as falling forth of the womb.

A pouch of the urethra is a rare occurrence; it is sometimes called "urethrocele," and this has been mistaken for a cyst. Sometimes it is nearly a cyst, having only a small opening into the urethra; and you must take care, in the case of a cyst appearing to be on the urethra, that it is not connected with it.

Occasionally you have cold abscesses—acute recent abscesses would not mislead you—but cold chronic abscesses in the recto-vaginal or vesico-vaginal tissues are not very rare, and you may mistake them for cysts; indeed, the diagnosis may be impossible until you have evacuated them and seen the contents. You must remember, too, as a case now in "Martha" illustrates, that some collections of matter or blood in the lowest part of Douglas's space may mislead you.

There is also a cyst-like dilatation occurring at one side of the vagina, which I describe in another lecture under the name "unilateral hæmatocolpos." That is the condition of a woman who has a double vagina, one side of which is closed and filled with mucus or blood; and you might suppose it was a cyst of the vagina, when in reality it was an imperfect double vagina.

You must also bear in mind that recto-vaginal, vesico-vaginal, pudendal, and perineal herniæ are found. A case occurred lately to a friend of mine: he was called by a practitioner to open a cyst in the anterior wall of the vagina. He went prepared to do so, and found, to his astonishment, that the cyst on pressure disappeared, and on minute examination he found it was vesico-vaginal hernia. If he had proceeded to open it he would almost certainly have destroyed the life of that poor woman. You must keep in mind the possibility of hernia.

In the labia you may have cold abscess and varix and œdema, producing tumours which must be distinguished from cysts.

Lastly, you have, what I mentioned before, cysts in the vagina which are merely hernia-like sacs filled with peritoneal fluid. A case of this kind occurred in my own practice. A woman with ovarian dropsy had been troubled with what was called procidentia uteri. This was not treated, for she died of the ovarian disease, for the relief of which no operation was performed. At the post-mortem examination it was found that her vagina was filled by a rounded cyst with a narrow neck. The seeming cyst was a peritoneal pouch or hernia, filled with dense ovarian fluid, which had come or been forced through an aperture in the bottom of Douglas's space, making the peritoneum to protrude into the interior of the vagina as a pouch, which, when replete, resembled a cyst.

So much for diagnosis; from which you will see that there are many things to consider before you feel sure about a vaginal or vulvar cyst. The symptoms may be said to be none unless the cyst is inflamed or large, or produces mechanical inconvenience. If any of these cysts be irritated you have irritation of the neighbouring organs, especially the bladder. You will remember a case that I read, in a former lecture, of cyst in the vagina inserted upon the

urethra; that case illustrates the production of symptoms by irritation of the cyst. The woman had no symptoms until the cyst was treated, and then she suffered, temporarily, from irritable bladder.

One mechanical form of irritation I must mention, because it is not the mere result of size. A lady was said to have falling down of the womb, and she had consulted several doctors, telling them that something came out when she stood up or walked about; and this irritated her, the womb, as she believed, slightly protruding when she was in the erect position. She was suffering from a glabrous mucous cyst, which produced no symptoms when she lay down—then it was within the vagina; but when she stood up it protruded through the vaginal orifice. It escaped observation, because it was glabrous, attached to the side of the vagina, and not very large. After it was treated the woman's mechanical annoyance disappeared.

And now a few words about each of the kinds of cyst. The first of these is the cyst of Nuck. The vaginal prolongation of the peritoneum, which is highly developed in man, is said occasionally to occur in women, and to be nipped off from the general peritoneum in woman as in man. When this vaginal process is nipped off in a woman, you have left a potential peritoneal cavity in the groin, which may become distended, just as a hydrocele distends the tunica vaginalis in the male. The only case of this kind that I have seen was in the upper and outer part of the mons veneris; it lay at the external inguinal orifice, and was so constricted by it as to have an hour-glass shape, one part within the inguinal canal, and the other just beyond it. Opening it did not effect a cure, for it healed and was refilled; but the injection of tincture of iodine, after it was a second time opened, cured the woman.

Sebaceous cysts of the vulva, especially about the vestibule, are not rare, and a little cyst may irritate a woman and

cause symptoms out of all proportion to the real gravity of the disease. I have seen many such cysts filled with yellow matter like pus, or sebaceous matter, and I have never found any difficulty in treating them.

Closed cysts also occur in the labia which cannot be referred to dilatation of any natural cavity that I know of, but they are not common; they occur in situations where there are normally no cavities at all. The cases that I have seen have been easily treated just in the same manner as other cysts of the vulva.

Cysts of the vagina are not very uncommon, and they mostly occur in the lower half of that passage. They seem to occur at different depths in the vaginal tissue; sometimes having a wall so thin that it is translucent, at other times one so thick as to cause the cyst to feel like a hard tumour, as in the case I shall presently read to you. They are generally single, and may be of any size. The largest I have seen was fully the size of a Mandarin orange; it was nearly pedunculated, and inserted very high up in the vagina, and protruded outside when the woman walked about, so that she thought she had falling down of the womb. These cysts seem to be very rare, but I have happened to see a good number of them; I cannot tell exactly how many—probably thirty. They can be treated very satisfactorily, and they almost always come under treatment only when considerable in size; and it is necessary to get rid of them, because all such diseases give rise to a good deal of anxiety in the patient's mind. The treatment consists in evacuating the cyst by opening it: but this is not always sufficient. Although this is sufficient in many cases, you must not trust to it; but you should do as you would in the case of a ranula, or of a cyst in Cowper's duct—cut out a bit of it to prevent it healing up. If you consider what a small hole a simple puncture will afterwards become when the cyst shrinks, you will see that it will naturally heal up, and

then the cyst will be refilled. You therefore clip out a bit with curved scissors, having previously seized it with the vulsella. It is recommended by many to cauterize the interior of the cyst, or to irritate it. I do not believe this is required, nor that it will be successful in obliterating the cavity. If you examine a woman on whom you have operated, even years afterwards, you will find traces of the old cyst; at least, it has been so in cases I have examined after the operation: there is an opening that gives no trouble, and the woman is just as well cured as she can be. Cutting out the cyst has been recommended; but this would be difficult, and would involve much loss of blood and danger to life without any compensating advantage whatever. It would be an example of *nimia diligentia*, of surgical greed, from which I dissuade you.

An example of a hard-walled cyst occurred in "Martha" lately, which I shall now read to you. It is supposed to be a dilatation of a deeper vaginal crypt than those ordinarily seen, but I do not know whether this is true or not.

M. W., aged twenty-four, married three years, has had one child, born August 8, 1879. No miscarriages. Has had no trouble with micturition. First noticed a lump in anterior wall of vagina in June, when it came down unexpectedly and without pain. Thinks it was as big then as now. Has had no pain in it nor disturbance, except that towards night it comes down, protruding between the labia, and interfering with easy walking. When she lies down it goes back. The pelvis is occupied by a rounded, resistant, hard, elastic, globose swelling, extending from the orifice of the vagina and the orifice of the urethra as high as the finger can reach. The part of it visible is pale and healthy. It is not tender. Sound enters the bladder in front of the tumour and towards its right side five inches. Bladder healthy. Lump was punctured by hypodermic syringe-needle, and a clear, limpid fluid drawn off, containing (about

one-sixth) albumen and chlorides. The cyst was now incised so as easily to admit a finger, and a small piece of its wall was excised. Four days afterwards the finger with difficulty passed the opening, which was then enlarged. On dismissal a few days afterwards the cyst was big enough only to admit the first phalanx of the finger.

Long ago I saw a case of numerous cysts of the vagina; they were small cysts; but I am not sure that I should diagnose the case now as I did then, because since that time I have become aware of a remarkable disease called vaginitis emphysematosa, where the internal surface of the vagina becomes covered with little cyst-like blebs which are full of air, not of retained mucus.

Cysts of the glands of Cowper, or Bartholin, or Duverney, or Huguier (for they have received all these distinguished names) are described; but I have never seen one, and I feel uncertain of the accuracy of the diagnosis in cases of which I have read, because they are described as deforming the labium and projecting into the vulva, and I should not expect this result to take place. If one of the glands of Cowper were enlarged by becoming diseased and forming a cyst, I should expect it to appear between the posterior extremity of a labium and the nearer tuber ischii, where tumours are produced by inflammation and abscesses of these glands, not in a labium.

Cysts of the ducts of Cowper's glands are not uncommon. We have had examples in "Martha," but I have brought none of them to read to you; it is not necessary to do so.

If you often examine visually the vulva, you will find that a very common morbid appearance is a slight inflammation around the orifice of a duct of Cowper. This inflammation is utterly trivial. I never heard it complained of, though, no doubt, it may cause minute irritation; yet I never have found this minute irritation the cause of complaint. The opening of the duct of Cowper in the middle

of this little spot of redness is not much bigger than a punctum lachrymale. This may easily be closed, either by blocking of the passage completely, or by atresia from the growing together of the walls of the orifice; and, when this happens, you are sure to have dilatation of the duct by an accumulation within it of the secretion of the gland. This duct so dilated may, in time, become as large as a hen's egg, and I have seen it even bigger than this. In some cases it is so enormous as not merely to deform the labium, but to reach up the side of the vagina nearly to the neck of the womb. The side most often affected is, curiously, the left. A case, with the cyst reaching to the neck of the womb, may be suspected to be one of dilated duct of Gärtner.

The disease is easily recognized by the painless semi-globose deformity of the posterior half of the labium. It is often swollen so much that the wall of the cyst is translucent. This cyst produces no symptoms but such as are mechanical; chiefly interference with the functions of copulation or parturition. It is very easily treated; the same plan will apply as is used for a ranula or cyst of the vagina. You puncture it and clip out a bit of the wall so as to insure that the opening will not heal up. The piece should be cut out as near the situation of the natural opening of the duct as you can guess; that is, just outside the insertion of the hymen at its postero-lateral part.

You are likely to meet with several examples of this disease, and you will find no difficulty in curing them.

Very lately we had a thick walled vulvar cyst, exactly like a cyst of Cowper's duct, which was filled with tarry fluid like that of retained menses. We have had also a case resembling an enormous labial cyst; it was repeatedly punctured, and a thin dark grumous bloody fluid discharged in large quantity. The case was one of malignant disease of the bones of the pelvis.

LECTURE XIX.

ON OVARITIS.

The diseases to which I am to devote most of this lecture are very difficult of precise investigation. They are seldom fatal, and consequently seldom illustrated in the post-mortem theatre. For these reasons progress in this department of gynæcology has been very slow. Lately we have got some light on it from the practice of the oophorectomists or performers of what has been called normal ovariotomy.

Ovaritis, like several of the diseases that I have been lecturing on in this room, occurs as a complication of pyæmia; and such ovaritis I do not consider now at all. A case of this sort occurred in "Martha," and I mention it to give you an example of kinds of ovaritis that I am not considering at present. A woman was delivered with great difficulty on account of placenta prævia, complicated with slight contraction of the pelvic brim. After delivery she suffered from putrid intoxication or sapræmia. She was in this condition brought to the hospital. The putrefaction was arrested by intra-uterine lotion. She then showed symptoms of pyæmia, and died. Two pelvic collections of pus were found—one (perimetric) in a cavity bounded by the left ovary, the uterus, and above by a piece of omentum: this contained half an ounce of pus; the surface of the ovary was ulcerated where it formed the wall of the pus-sac; the ovary itself was enlarged, and corpora lutea in it contained pus. The other collection of pus was in the cellular tissue (para-

metric), to the right of, and a little behind, the cervix uteri, and contained the same quantity of pus. The walls of the uterus were flabby. The persistent decidua serotina was easily made out. The right ovary was swollen, renitent, as big as a walnut, and when cut into was found to have had its healthy tissue everywhere utterly destroyed and converted into a yellow, purulent, almost diffluent mass. There was no lymph in Douglas's space. Bladder and uterus normal. No general peritonitis. Of such ovaritis with suppuration examples are not rare, because puerperal pyæmia is not rare.

Leaving that subject, I come to say a few words on what may be regarded as prefatory to ovaritis—ovarian irritation, often called ovarian neuralgia; a very common affection. It is characterized by absence of every sign of disease, and of every regular symptom, except pain in the region of one or other ovary; curiously, more frequently in the left than in the right ovary. You know that when a disease is characterized by pain, and nothing else, it is called an irritation or a neuralgia; and so it is in the case of the ovary. Although that is the name given to it, you must not suppose that that is the final or true pathology of the disease. I am very doubtful of that. In accordance with the nature of this disease, characterized by a pain in one or other groin over the ovary, it is treated by anti-neuralgic medicines, and a combination of zinc and quinine has had great reputation in cases of this kind. Lately I have called it the Charcot pain, a name explicitly involving no theory, and intended not to do so, and especially to avoid implying acquiescence in the ovarian localization asserted by this great author.

I go a step further, and now mention some cases which are not inflammatory, and yet which are certainly more than merely neuralgic. Of this kind of disease many examples occur. Either one or both ovaries may be felt, and they are slightly enlarged; they are tender; and you may well ask, "Why, then, do you not call that inflammation?" There

are the following reasons for this:—That in many cases, as in one which I am just about to read to you, the women are in perfect health—not in all cases, for many practitioners would ascribe the nervous, hysterical, condition of some women to this disease of the ovaries; but it occurs frequently in women who are in blooming health, who have nothing to complain of except tenderness of the ovaries, not pain in them. Further, cases of this kind are not in any marked manner benefitted by antiphlogistic treatment. They generally, indeed, resist all treatment. Here is an extreme case:—A. H., aged twenty-four years, married a year and a half; never pregnant; catamenia regular. She complains of painful menstruation. On examination, the left ovary is easily felt, and somewhat swollen and tender. The uterus is natural, except extreme sensitiveness of the mucous membrane of its body. The cervix permits easily the passage of only a No. 7 bougie. After some partially successful treatment of the dysmenorrhœa, she left the hospital, but soon returned, saying she was not cured. Now she privately made known that what she wished cured was not so much her painful menstruation as pain in sexual connection—a pain which delicacy had prevented her from earlier mentioning. With this in view, she was re-examined, and now both ovaries, somewhat prolapsed, swollen, and tender, yet freely mobile, were easily felt. Pressure on either of them produced pain, which she recognized as that of her dyspareunia. She is now under treatment. Counter-irritants externally, and small doses of corrosive sublimate internally, are being used. I can only say I hope she will be cured.

Now I come to cases about which there can be no doubt, where you have every local indication of inflammation that you can get under the circumstances, and corresponding constitutional disturbance. Here there is a very great difficulty, namely, in arranging the cases into classes according as they are acute, subacute, and chronic. Many cases

are easily recognized as chronic and subacute; and among such some pathologists might place the case of dyspareunia that I have just read. But the great majority of cases it is impossible to place exactly in any category. At the other extreme, however, you have cases which end in abscess. These are evidently acute inflammations. Such acute cases ending in abscess, and not of the pyæmic kind, that I have mentioned at the beginning of this lecture, are not uncommon, and the abscess is perioophoric, or in that part of Douglas's space in which the ovary is lying. Acute inflammation of an ovary after abortion, delivery at full time, or in the uninpregnated female, not rarely ends in pelvic abscess, which is a perioophoric abscess. No doubt, apart from pyæmic suppuration, cases of abscess or suppuration within the ovary do occur, especially small abscesses; but, clinically speaking, I know nothing of such cases. I have seen them in the post-mortem theatre. I am inclined to throw considerable doubt upon the histories of cases described as of large abscesses within the ovary, containing half a pint or pints of pus; and it would require careful dissection of such a case, careful consideration of all its history and characters, before it could be held as proved that such a large collection is an ovarian abscess, and not a suppurating cyst. There can be no doubt that a small abscess may form in the ovary; but I do not think it is proved that large abscesses, such as are described, ever form in this organ. I have never read a case nor seen a dissection which satisfied me on that point.

I have said that the progress of this department of gynæcology is very slow; and we owe progress in it to two causes—the recent enthusiasm in gynæcology which is prevailing all over the world; but more especially to increased exactness, and more extensive application of the bi-manual method of examination. You know very well, and it is admirably illustrated in many parts of medicine, that although a thing is close before your eyes you may not see

it unless you look specially for it. Nothing is more painfully true than this; and in no department of science is it better exemplified than in medicine. When you carefully look for disease of the ovaries, and the careful seeking is done mainly by bi-manual examination, you will find that there are very many cases of minor disease of the ovaries. Bi-manual examination may be made in various ways. It is to be done in every case in which you pretend to make a thorough examination of the internal genital organs. Before proceeding to it, the bowels must be emptied—that is to say, it is, as a preparatory measure, well to give a dose of castor oil. If you do not, you may find the visit to your patient lost in consequence of the distension of the lower bowel with fæces. You cannot make a fine examination of the ovaries while a quantity of fæces is stuffing the pelvis. The bowels being emptied, your patient is placed on her back at the right side, or at the obstetric side, of the bed; her right thigh is raised, the right foot being placed adjacent to the left knee. With the forefinger of your right hand you examine per vaginam and per rectum. Simultaneously you assist and contribute to the examination by the left hand placed over the hypogastrium, pressing the parts; the left hand pressing the parts down upon the right, the right pressing the parts up upon the left. Making the examination in this way in a woman who is not nervous, who submits well to the examination, and who has not a great quantity of fat, you can feel the pelvic organs with very great precision. You can easily, as you will have plenty of opportunities in healthy women of ascertaining, make the fingers of the two hands meet; for instance, in front of the uterus, and thus you grasp the bladder between the two hands. You can place the fingers so as to grasp the uterus and feel every part of it; and pressing the fingers towards the sacro-iliac joint on either side, you can, in a great number of cases, seize either ovary. If you cannot find an ovary, that is not

proof that it is healthy; it is a presumption, however, in favour of its being so, for, in almost all of the minor diseases of the ovary, you can easily seize it. In a woman with healthy ovaries it is sometimes impossible to identify these organs in this way. They are then too small, soft, and mobile. If, however, an ovary is of the size of a walnut, you can generally quite easily feel it. This bi-manual examination is frequently rendered abortive by the presence of adhesions; and if these are present, they, as it were, throw a cloud of uncertainty over the examination, by preventing you from identifying the ovary and feeling it.

I may mention here that at least one eminent author says that the minor forms of inflammation of the ovary never exist without ulceration of the cervix. That is a mistake. Were it true, it would be an extremely valuable indication; for if there were no ulceration of the cervix there could be no ovaritis.

What do we make out by bi-manual examination? We make out firstly, tenderness, frequently intense tenderness; and this may prevent thorough examination. The woman cannot endure it; she shrinks, and will not allow you to proceed further. Be very careful, therefore, not to elicit more pain than is inevitable, at least until you are about to finish your examination. You frequently are astonished to find the presence of this tenderness, for it is often present when the woman complains of no distinctive ovarian pain. It attracts your attention in such a case for the first time to the seat of the disease.

The position of the uterus is affected by ovarian swelling. Ovaritis is a disease eminently liable to relapses; it is liable also to attack one and the other ovary alternately. In these cases you often observe a change in the position of the uterus when the ovary becomes enlarged and swollen. It may be retroverted when the ovary is healthy, and then be pushed up into a natural situation when the ovary is swollen. If

the ovary becomes increased in size, and therefore in weight, you would naturally expect it should fall down,—and so it does; it becomes what is called prolapsed; instead of being upon a higher level, as in health, it lies upon the level of the neck of the womb—sinks into Douglas's space, sometimes even depressing the floor of this space. This prolapse makes the organ more easily felt, and in the case of dyspareunia that I read to you, both ovaries were distinctly felt and both prolapsed, lying down on the level of the cervix instead of higher up behind the uterus. This prolapsus does not invariably occur; but when it does occur you can easily understand how it should aggravate dyspareunia. A woman with inflamed ovaries in the natural position may not have dyspareunia; but a woman with a slight degree of ovaritis, or with only slightly enlarged ovaries, if they are prolapsed, may have great dyspareunia.

Besides making out the condition of tenderness, you examine the consistence of the organs. They may be more or less hard and elastic. Next, you pay attention to the size of the organs. This is a subject that has been very much disputed. I am satisfied that an inflamed ovary may increase in size to many times its natural bulk, but not many times its natural lineal dimensions; and these two modes of measuring are often confused. I have seen in a post-mortem a hypertrophied ovary which was as big as a small hen's egg, and that without anything to be discovered in it except what may be called areolar hyperplasia, or, in simpler words, increase of juice and of fibrous tissue. In some cases—rare, no doubt—the ovary becomes smaller, and you have a condition which has been described as that of cirrhosis. In this cirrhotic disease, the ovary of an otherwise healthy, young, and vigorous woman has become contracted to a size little larger than that of a field-bean; and when cut through it is found to consist of nothing but intensely dense whitish fibrous tissue.

The enlargement of an ovary that is the subject of inflammation is a matter that requires a little more description, because in some cases that are otherwise naturally classed clinically as cases of ovaritis, you have merely irritation from the growth in the ovary—not of ovarian dropsy, but of a thin walled cyst or cysts, generally filled with a limpid straw-coloured fluid, sometimes containing fluid that is grumous, or at least tinted with blood. There was a case in "Martha" last Tuesday. The woman came to us in perfect health, except with pain in the region of the left ovary. Her left ovary was about the size of a small orange, and felt as if it were a tense cyst. I believed, though I could not prove it, that it had in it a tense cyst, and it was the tension of this cyst that caused the pain, and nothing could do it any good. I anticipated, however, speaking from considerable experience of such cases, that it would burst and disappear without giving the woman any more trouble. It did soon disappear suddenly, and without causing any symptoms whatever. If the contents are unfortunately grumous, or mixed with pus, such a cyst will probably give the woman a good deal of trouble—it may be fatal. This disease is generally called hydrops folliculi, and the bursting is not rare. Sometimes, instead of one cyst you have several; not a multilocular cystoma, but two or three or more of similar cysts or dropsical follicles. They are said to be Graafian, but that remains to be proved. It is certain that some of them are Graafian, because ovules have been found in them. Several years ago I described this formation and bursting of ovarian cysts as forming a disease that might be confused with ovaritis; and since then I have taken great interest in noticing, not post-mortems—for, as I have told you, the disease we are discussing is scarcely ever illustrated in post-mortems—but what is nearly as good for the purpose, cases of spaying, an operation which has been introduced recently into gynæcological practice. If you read recorded

cases of the spaying of women suffering from what was supposed to be ovaritis, you will find in an astonishing number that, on getting hold of the ovary, it was found to be composed of fragile cysts, whose presence, previous to the operation, had not been suspected.

This complication adds greatly to the difficulty of diagnosis. The essential part of the diagnosis I have gone over. I shall now mention a few symptoms which occasionally accompany ovaritis. These symptoms, no doubt, frequently depend upon corporeal endometritis, which, in a considerable number of cases, accompanies ovaritis. Corporeal endometritis is inflammation of the mucous membrane of the cavity of the body of the uterus. This being so, you can easily understand that in cases of ovaritis you will frequently have either menorrhagia or prolonged menstruation or pseudo-menstruation. Occasionally, however, you have amenorrhœa; and in such cases there is probably no endometritis. Women are frequently sterile when suffering from ovaritis; but there is no invariable connection between the two. Indeed, although it is probable that there is some connection, it is far from being proved. I have known typical cases of ovaritis lasting during the child-bearing period of life, in women persistently fertile.

I must now say a few words on peculiarities of ovaritis, and the case I am going to read to you will illustrate the tendency of the disease to relapse.

A. O., aged thirty years, married for five years; has had three children, the last eighteen months ago; no miscarriages; catamenia natural and regular, the last beginning on December 26; admitted January 18. She complains of pain in the hypogastrium and in the left iliac region, which has continued since January 1. On careful examination the only disease discovered is a swollen, tender, left ovary. Besides ordinary constitutional treatment, a blister two inches square was applied over the left inguinal canal, and

a course of half-drachm doses thrice daily of the liquor hydrargyri perchloridi was instituted. Under this treatment she rapidly improved; but a week from its commencement—that is, on the 25th—the symptoms and signs of disease, which were dying away in the left side, began with some intensity in the right. A similar treatment was used for this relapse, and with similar good results. This is a remarkably favourable case. What was the cause of it we do not know, but it was of very short duration, and there is considerable reason to fear that it will again relapse.

There is a distinction of the disease into follicular or parenchymatous inflammation and interstitial or stromatous inflammation, which is of very great importance, but which, for clinical purposes, has as yet no interest. I know no way during life of making any distinction between them. The follicular inflammation is said to be most frequent as a complication of fever or cholera, and to be accompanied by little tendency to the formation of adhesions. The inflammation of the stroma is said to occur chiefly after abortion or lying-in at the full time, and in it you have greater tendency to increase of size and the formation of adhesions.

The presence of adhesions of and around the ovary prevents your being able to diagnose precisely the disease while they persist. It may be exactly diagnosed if you ascertain the condition of the ovary before the adhesions were formed; or if you ascertain the condition of the ovary after the adhesions disappear; and both of these observations are not rarely made in actual cases. When you have adhesions forming around the ovary you have always a threatening of the formation of peri-oophoric abscess, which I have told you is not of very rare occurrence. If one ovary is surrounded by adhesions, you frequently have a singularly distinct limitation, made out by your examining finger, of the condition of the upper part of the cavity of the

pelvis as supposed to be divided into four parts. In the case of the inflammation of one ovary, you frequently have one of the posterior quarters of the upper part of the pelvis solidified. You have then a right to suspect that the mass of hardening and adhesions is not the result of metritis, but the result of the inflammation of an organ which is in that part. I shall read to you a case where this was particularly well observed, and where, in accordance with the natural history of the disease, the adhesions spread, so as in the latter part of the case, to occupy both posterior quarters, that is, the posterior half of the upper part of the pelvic excavation, and, as you might expect, the uterus was pushed somewhat forwards.

S. E., aged thirty-four, married for four years, has had two children and no miscarriages. Last child born about eleven months before admission to "Martha"; much hæmorrhage at its birth. Catamenia began when she was thirteen years of age; they are always irregular, painful, and profuse. The last period occurred six weeks before admission. About three months ago she underwent an operation for fissure of the anus, which has not relieved her. She now complains of pain on micturating. Nine days after last confinement she travelled a hundred miles by train. This brought on pain in the lower part of the back and in the lower part of the belly and along the outside of the right thigh. This pain has been aggravated during the last three months. Has a little white discharge. There is, on external palpation, a feeling of fulness over the right side of the brim of the pelvis. In the same part there is tenderness. Digital vaginal examination discovers the cervix uteri in a natural situation. The probe discovers a uterus of natural dimensions in its natural situation. The uterus is fixed, and cannot be discriminated by the finger from a mass of tender hardness which occupies the right posterior quarter of the upper part of the pelvic excavation. The tender hardness subsequently increased in

bulk, extended across the pelvis to the left side, and displaced the uterus forwards. She was kept in bed and treated by drugs. When, after six weeks, she was dismissed, her symptoms were all much alleviated. The signs of disease had also disappeared, except an adherent fixed uterus. Here was a case of subacute ovaritis almost certainly produced by the journey after the last confinement. The disease had lasted about eleven months, and during her stay in the hospital it extended from the right side to the left, but under proper treatment (whether the improvement is to be ascribed to the drug part of the treatment or the rest and proper hygienic care, I cannot say) the active disease rapidly disappeared.

Before I conclude I must say a few words as to the causes and treatment of this very important disease. Occasionally it is seen as a consequence of fever, especially typhoid, of cholera, and of rheumatism; and, in close connection with these diseases, it is very frequently a result of the use of alcoholic liquors, even when these are not taken to notable excess. At present my impression is that that is the most frequent cause of the disease; and this view of the causation of the disease is in the most gratifying manner frequently corroborated, if not proved, by the cure which follows upon the adoption of teetotal living. A great mass of cases occurs as a consequence of recent marriage, suppression of menstruation, abortion, and delivery at the full time, where there is no evidence of blood-poisoning. In a certain class of women you have the disease occurring in its most characteristic form; and it is in young strumpets that the disease is best studied. There it is a consequence of gonorrhœa. The inflammation extends to the ovaries. It may be chronic for a considerable time, and produce, as its chief annoyance to the patient, slight loss of blood in consequence of the endometritis which, in this case, accompanies it. Then the disease may produce peri-oophoric adhesions;

and, under proper treatment, you may watch the disappearance of these peri-oophoric adhesions and the disappearance also of the ovaritis. It is in cases of young strumpets that I have learned most of what I have been describing to you.

I have said that ovaritis, and it is especially true of the subacute kind, occurs frequently after marriage, and often prevents fertility. If the desired pregnancy comes soon it is a most fortunate thing for the prospect of disappearance of the ovaritis. I believe orchitis after marriage is not common: such cases do not come in my way, but a medical friend has told me of a case of double orchitis beginning on the night of marriage.

Now a few words on the treatment; and I begin by telling you that you will find a great many cases chronic—which is almost a synonym for incurable. I advise you, indeed, in many cases which resist a properly conducted treatment, to give up the attempt at cure. You will only bother your patient, make her a valetudinarian, and do her harm, by further persistence in attempting to cure a disease which proper treatment, duly varied, has failed to remove. The treatment is modified according to the nature of the disease—according to its acuteness. In every case you wish rest; and, no doubt, the more serious a case is, the more strict should be your injunction as to rest, and in bed. Physiological rest can only be obtained very imperfectly, for the woman must menstruate, and that is an interference with physiological rest. In married women there are other difficulties which do not require to be described. In many cases the use of leeches applied to the neck of the womb or applied over the inguinal canal is very valuable. The medicines most relied upon are corrosive sublimate, iodide of potash, and bromide of potash. As leeches are specially useful in the acute cases, so frequent blisters over the inguinal ring or in that region are valuable in the chronic

cases. Lastly, it has of late years frequently been decided to spay women in this disease; and many cases of the operation are recorded. That operation is still *sub judice.* Most gynæcologists say that it is condemned already, but upon it I reserve my opinion. Only I may say that I anticipate that the danger of it will always be out of proportion to the gravity of the disease.

LECTURE XX.

ON PERIMETRITIS AND PARAMETRITIS.

Lately I told you that procidentia of the womb is purely mechanical, as much so as a dislocation of the shoulder or a hernia. Now, the subject upon which I am to lecture is inflammation in the neighbourhood of the womb, and I begin by telling you, what I shall almost immediately afterwards partially contradict, that this disease is purely vital. Although it would be well worth our while, yet it is not at present a proper subject, to enter upon the great question implied in vitalistic doctrine, which has been very extensively discussed in this hospital, a discussion in which very great men have taken part—for instance, Abernethy, Lawrence, and still more recently, Sir James Paget. I shall only say that I call this inflammatory disease vital, not because I adopt vitalistic doctrines in their full extent. The whole tendency of my scientific thoughts is against vitalistic doctrines. I believe the time will come when nearly all the diseases peculiar to women will be explained by a transcendental physics including chemistry. But that time is very far distant, and I dismiss this subject, merely remarking that the disease which we are about to discuss is vital in contradistinction to procidentia, which is rudely mechanical.

Time will allow me to dip only superficially into our subject. In medicine and surgery inflammation is the most important of all the morbid processes. So it is in gynæcology. Let us take two inflammations—one, parametritis ;

and one, perimetritis. There are many cases of the kind in my wards at the present time. Indeed, inflammations of the genital organs are the stock-in-trade of the gynæcologist. There is no doubt they are by far the most prevalent and the most important uterine diseases. In the womb, as in all other organs, the great causes of inflammation are injury and cold. It is difficult to decide in most cases which is the more potent; frequently they are combined, and you can easily understand the combination and the commonness of the disease when I tell you that these inflammations very frequently follow menstruation, miscarriage, and delivery at full term. You can easily imagine the tremendous influence of exposure to cold after the injuries and bruises implied in the last of these processes.

The next point upon which I must say a few words, in order to lead the way to the cases before us, is the nomenclature. This, if I had time to give it fully, would be to a great extent the history of our knowledge of the diseases. When we speak of inflammation localized in individual organs, we speak of inflammation of the womb or metritis, inflammation of the tubes or salpingitis (a disease almost unknown—our scanty knowledge being chiefly derived from the dissecting room), and lastly, inflammation of the ovaries or ovaritis. The subjects of my lecture are perimetritis and parametritis, and you must not suppose that they are separate from the three diseases I have just mentioned. They are merely so on account of our too frequent ignorance of their origin. They are not separated theoretically, but for the purpose of clinical teaching. Suppose you were to put a tangle tent into the uterus of a woman without any precaution, leaving it there for days; in all probability it would give rise to perimetritis or parametritis. There would be pain and tenderness, &c., and you would diagnose one of these diseases. It is not, however, an inflammation around the womb merely, but also inflammation of the womb itself,

although the only tangible evidence you can get is of peri- or of para-metritis, not of metritis proper. This nomenclature, therefore, is chiefly nosological or practical, and not pathological or scientific. Perimetritis is very frequently spoken of as pelvic peritonitis. A very common term for parametritis is pelvic cellulitis—an objectionable name, although it is very much used.

The next point, before coming to the cases themselves, is to beg you to dismiss from your minds two errors in regard to these diseases; and, if they have not entered your minds already, to keep them away. The first of these is the notion that these three diseases—metritis, salpingitis, and ovaritis—are rare, especially in unmarried women, or women apart from the accidents of pregnancy. This was a very prevalent idea, and the causes of error are very easily found. First, is the neglect of the proper method of study of these diseases. One of the most respected teachers in London long ago described a disease which was for a long time known, or supposed to be known—namely, irritable uterus. This is embalmed in the minds of all the old doctors now living. We might as well talk of an irritable nose, or an irritable tongue. I never saw an irritable uterus of the kind referred to. No disrespect to the great Dr. Gooch: his day is past, as mine will be ere long. About thirty years ago young ladies frequently had spinal irritation. What that was I do not know. The expression lived in my day: it is now as dead as irritable uterus.

Great improvements have arisen from touching everything and looking at everything, By these means we are enabled to recognize metritis and ovaritis as far from rare apart from pregnancy. But we recognize in unmarried women, and in women apart from the accidents of pregnancy, metritis or ovaritis proper, comparatively seldom. We find the evidence of these diseases having originally existed in perimetritis and parametritis. This is what you must understand.

In our much used text-books, at one part we find metritis and ovaritis, and quite in another part parametritis or pelvic cellulitis, as if it were a totally distinct disease,which it is not. It would be the same error to describe a bubo as an abscess, or suppuration of the cellular tissue, and nothing more: whereas it is originally an inflamed gland. Suppose we pass a catheter into the urethra of a man suffering from a stricture; this may give rise to a perineal abscess. Inflammation of the strictured portion spreads to the surrounding parts. So it is with inflammation of the uterus. The effusion and suppuration take place in the neighbourhood. The whole heart may be inflamed; but the outer or inner membrane, the pericardium or endocardium, shows the inflammation most.

Again, up till lately we almost never heard of perimetritis or pelvic peritonitis, only of parametritis, or pelvic cellulitis, or of pelvic abscess. All these inflammations or abscesses were supposed to be in the cellular tissue. Perimetritis was almost unknown.

This great improvement—the discovery of the frequency of perimetritis—we owe to Bernutz, a Parisian physician still living. This increase of knowledge and of our beneficent powers, was not only made good for perimetritis, but also for a closely related disease, hæmatocele. In all my early life I never heard of such a disease; and when I heard of it, it was only as an effusion of blood into the cellular tissue like a great black eye or thrombus. Bernutz showed that the great majority of large and grave hæmatoceles and pelvic abscesses are not in the cellular tissue, but in the peritoneum. Bear this in mind. I do not say the great majority of hæmatoceles and pelvic abscesses; but the great majority of grave and large hæmatoceles and pelvic abscesses.

The last point I shall mention in this connection is the commencement of our knowledge of induration around the womb. The man who, long before Bernutz, made this

discovery was Doherty, who afterwards became Professor of Midwifery in Galway, now dead. This was the foundation of future progress. Doherty knew nothing of the distinction between perimetritis and parametritis. He merely recognized pelvic indurations. "Hard as a board," were the words he used, and they are still employed. He knew that these were inflammations, and not necessarily abscesses, and this is a point of great importance in the pathology of this part of the body.

Doherty began a series of investigations which have ended in this—that there may be two kinds or degrees of parametritis. The first is sometimes called phlegmon, to distinguish it from suppuration, or abscess. The term inflammatory induration is generally applied to the former. Suppose you have a little boil on the hip, it will be surrounded by an extensive inflammatory induration, perhaps as big as a saucer. This is the same kind of change as takes place around the womb, from inflammation which begins in its structure. Should an intra-uterine pessary be inserted, without proper care being taken, and should the patient be seen a week afterwards, probably instead of finding everything soft and movable around the cervix, a tender hardness may be found around the womb, to use Doherty's words, "as hard as a board"—that may be parametritis. That this may also be perimetritis was the great discovery of Bernutz.

The lumps produced by perimetric adhesions were generally mistaken till his time. I remember a case diagnosed as a fibrous tumour of the uterus, a rounded hard mass, as big as a child's head, above the brim of the pelvis, very slightly tender, fixing the uterus. The young lady died, and at the post-mortem examination it was found that there was no fibrous tumour at all. It was adhesive perimetritis—a packet of coherent intestines, which formed a hard mass, and had led to the deception of eminent and

experienced gynæcologists. When perimetritis without suppuration occurs, the ovaries and intestines and broad ligaments and parietal pelvic peritoneum become glued together, forming a hard tumour. All this perimetric swelling may ere long be dissipated like snow off the streets, just as often happens with parametric phlegmon.

We now come to two cases, and with these I must be brief. The first is a very interesting one. I will go over the most important points in it.

A. M., confined naturally; seven days afterwards was unable to pass water, and had a shivering fit. This was the commencement of the disease, and it occurred five months before her admission to the ward. It was a case of parametritis. Observe what a chronic disease this may be, and you will see it is liable to relapses. On the tenth day the patient became better, and left her bed, but she never got rid of the pain in the left iliac region, which came with the shivering. In a fortnight's time she was worse than ever; then again she got a little better, but subsequently her symptoms became more severe; and when she came to the ward, what did we find? The uterus was displaced a little to the right side—you will remember the pain was in the left—and from the neck of the womb to the wall of the pelvis on the left side the roof of the vagina was "hard as a board." The uterus fixed. Why did we call this parametritis? Chiefly because we felt no mass, simply a hard, tender surface. If it had been perimetritis we should have felt a mass by bi-manual examination, a packet of intestines and tube, &c., matted together. What we did find was such hardness as occurs around a boil or inflamed gland. Again, had it been perimetritis there would have almost certainly been tenderness on pressure in the left groin; and, lastly, if it had been perimetritis there would not have been a flat surface extending to the bone on a side, but a somewhat shaped tumour in the roof of the

vagina and probably behind the uterus. One evidence of the correctness of the diagnosis is that if the woman be examined to-day, it will be found that the induration has almost entirely disappeared, and that the cervix is close to the affected side of the pelvis, as if the uterus was adherent near the left sacro-iliac synchondrosis. By-and-by, we expect, it will get again mobile.

Now, a few words about a still more important case—a woman who for a long time swam for her life, having had an attack of pyæmia in the course of her recovery from a perimetric abscess. This was of the most frequent kind, sometimes called retro-uterine, because it has the same relation to the uterus as a hæmatocele, such as has been described as retro-uterine hæmatocele, by Nélaton (and it is often difficult to diagnose the one from the other).

In the case of which we are speaking, there was an enormous mass which pushed down into Douglas's space, driving the uterus against the symphysis pubis, and extending upwards as far as the umbilicus, displacing the bowels, so that it felt like a gravid uterus at the sixth month. The patient was a charwoman. She became suddenly ill, and had to leave her work. The same night she felt intense pain in the left iliac region. This was seven weeks before she came into the hospital. There was no remembrance of rigor. A fortnight after the attack a lump was felt in the abdomen, which gradually increased till it reached the enormous size described. The diagnosis was arrived at from its history, its size, its position displacing the uterus and bowels, and its great tenderness. The abscess burst into the bladder, and torrents of pus passed through it; pyæmia then occurred. She became dangerously ill, but is now nearly well. The lump has entirely disappeared.

What was the treatment of both cases?—Antiphlogistic! The same, without entering on minutiæ, as for inflammation of any other region. The most important element, however,

in the treatment was lying in bed, a remedy of more value in such cases than all other medicines or drugs put together. This was all that was prescribed in the first case. In the second, surgical means would have been adopted had not the abscess burst into the bladder. The treatment, therefore, was lying in bed. The proper use of the knife is extremely restricted, so much so that many of the greatest gynæcologists say that these abscesses never should be opened. This, however, I believe to be a mistake. Had the disease lasted longer in the second case without discharge of pus, I should certainly have proceeded to evacuate it by an incision per vaginam.

LECTURE XXI.

ON KINDS OF PERIMETRITIS.

The diseases to be now considered are various forms of internal inflammation. That pathological condition is the cause of the most frequent, and therefore—and for other reasons—the most important diseases of women. Inflammations not of distinct organs, as of the uterus or of the ovaries, are divided into two sets—perimetric and parametric. To-day we consider inflammations in the former category. When I say "inflammations not of special organs," I do not wish you to understand that inflammation of special organs, as ovaritis or metritis, has nothing to do with the diseases under consideration; for, although we speak, for example, of metritis and of perimetritis separately, yet the metritis, or it may be, ovaritis, is frequently the cause of the perimetritis, and error as to the frequency of inflammation of special female organs arises from neglecting this circumstance.

There are three kinds of perimetritis—adhesive, serous, purulent. Of these three the purulent is the most important, including, as it does, a large number of what are called pelvic abscesses; but of the purulent form I have no time to say anything at present. There may be another kind of perimetritis characterized by dryness and slight roughness of the peritoneum; but, from the deep position of Douglas's space in the body, this form of inflammation has, so far as I know, never been recognized in this situation. It is

common in cases of uterine fibroid and in cases of ovarian dropsy, and is easily made out by friction being both felt and heard. It often lasts for a long time, and does by no means always end in producing adhesions.

Adhesive perimetritis is almost certainly second in point of frequency among the diseases of women, the first position being held by uterine cervical catarrh. In post-mortem examinations of women no pathological condition is more frequently discovered than adhesions between the internal genital organs and neighbouring parts, especially about the ovary. The disease is generally characterized by very little, or by complete absence of, pain; it is generally, not always, narrowly limited in extent; and generally, so far as the life of the patient is concerned, it is of little importance. Persistent adhesions are sometimes the cause of aching or more decided pain, as John Hunter knew; but then persistence is a somewhat rare occurrence. Adhesions in this situation are gradually worn away and removed, just as they are when in the pleura or in the pericardium; and about the womb the same filmy or stringy adhesions, sometimes of great length, are not rarely observed, just as they are observed in post-mortems in the pleural cavity or in the pericardial. At length all these adhesions disappear. The upward and downward movements of the viscera rub them all away. They persist longest, and may be never removed about the ovary, and when persistent there, they connect the ovary with the neighbouring tube and broad ligament; and you can easily understand why they are not removed here, for the mechanism of their removal is absent, there being produced by inspiration and expiration no movement of the ovary upon the parts to which it remains persistently adherent. It is only in rare cases that uterine adhesions remain, either getting so organized as to resist the mechanism of their removal, or being so perfectly fixed as never to be subjected to it. An instruc-

tive illustration of this disease in its early stage was lately seen in the post-mortem theatre. The case was one of malignant disease of the cavity of the uterus, and solution of perchloride of iron had been injected into it. The woman died within two days afterwards. She had no complaint of pain in the region of the womb, but she had perimetritis—the characteristic perimetritis confined to the peritoneum of Douglas's space. The report of the autopsy says—"The posterior surface of the uterus and Douglas's space were injected and covered with a thin layer of recent lymph." Before I leave this kind of perimetritis I must remark upon its recent and insufficient recognition, and this arises chiefly from the circumstance that the professional mind connects with peritonitis high fever, vomiting, and intense pain. An adhesive perimetritis frequently occurs without any striking symptoms at all—indeed, generally. It produces fixation of organs and the feeling of solid lumps in the pelvis; and these feelings have hitherto proved a fertile source of error.

Before I leave this subject I must say a few words regarding a case which has just been dismissed from "Martha." In this case the adhesive perimetritis was produced by the use of pessaries—a not unfrequent cause of the disease. The case illustrates well the physical conditions and the rapidity with which evidence of the disease may disappear. At the end of the case you will observe the contrast with the description of the beginning, there being only left a little tautness on one side, no doubt the result of adhesion still persistent in that situation. You will remark also how, as improvement went on, a lobulated feeling supplanted the previous more uniform surface, the disappearance of the diffused inflammatory swelling allowing the forms of the organs to be felt.

Mrs. C., aged twenty-four, married for three years, had a child a year before admission, and a miscarriage seven

months thereafter. Menstruation is copious, painful and lasts a week. Micturition has been painful for the last fortnight. Feels and looks ill. Temperature 99·6°. Complains of pain and tenderness in the lowest part of the abdomen, chiefly on the left side. This she has had more or less for three years, and she has worn a large number of instruments for "bent womb." Latterly she has been so much worse as to seek refuge in the hospital. Per hypogastrium tender hardness can be felt occupying the brim of the pelvis. The cervix uteri is in its natural situation, and all around it, especially posteriorly, is dense, uniform, tender hardness extending to near the bony brim and producing fixation of all the organs and parts in this situation. The uterus is natural in position, and there is no special tenderness of its interior. She was ordered to have moderate diet, to be confined to bed, to have hot cataplasms to the hypogastrium, and to have the bowels regulated. Under this treatment she gradually improved, losing all pain and tenderness. After nine days' confinement in bed, examination discovered great diminution of the tenderness of the hard and fixed parts; there was a lobulated feeling in the hardness, the organs being felt through it; and the uterus was nearer to the sacrum. After sixteen days' confinement in bed, the hardness was no longer to be felt per hypogastrium. Per vaginam the uterus could be made out, somewhat anteverted; its cervix adjoining the upper part of the sacrum. It is easily displaceable, and no adhesion can be made out except on the right side, where there is tautness produced by removing the uterus from it. She feels now, and looks well.

I now come to consider Serous Perimetritis. This form of the disease is very uncommon, at least in a well-marked form. In an imperfect clinical form it is frequently observed in the post-mortems of cases where there has been peritonitis, there being found, under such circumstances, ad-

hesions at one part and little collections of serum at another. Such collections may be numerous, and some of them may be of pus, not of serum. The serous perimetritis that I am now speaking of resembles purulent perimetritis or pelvic abscess in every respect except the slighter degree of the symptoms of suppuration. Its special character is only, so far as I know, recognizable by evacuating the cavity. This is done according to the same surgical plans as in cases of purulent perimetritis or pelvic abscess; and when it is done, the peculiar nature of the disease is discovered, serum being withdrawn instead of pus. Analogous collections of serum are more frequently observed in the pleura than in the hypogastrium; in the latter situation they are undoubtedly rare. In the first case which I shall read to you, the disease was characteristically retro-uterine, the tumour filling the pelvis, and bulging downwards in a manner often compared to a stage of progress of the fœtal head, filling the pelvis. This retro-uterine position is common in hæmatoceles. In a well-marked case you have to press the finger between the swelling and the symphysis pubis in order to reach the cervix uteri, which is displaced forwards and upwards. So it was in the case that I shall read. This forcing of the finger you have also to do in some uterine and ovarian tumours, and in retroversion of the gravid uterus; and it is well to keep these facts in mind. The case was supposed to be an abscess, and it was resolved to open it behind the cervix uteri. The finger was applied to feel if any artery was pulsating at the point of selection in the mesial line. This point is taken in order to ensure entering the expanded Douglas's space. Here, in a healthy woman, the peritoneum comes in apposition with the roof of the vagina; but I would not warrant that you would puncture Douglas's space with any certainty in a healthy woman, for the extent of vaginal roof covered by peritoneum is then very small; but when Douglas's space is expanded by being filled with serum, pus,

or blood, which are detained there by adhesions formed above, enclosing the serum, and pushing it downwards into the pelvis to a greater or less degree, then there is no difficulty. If you are sure of the nature of your case, and of the need for interference, you plunge your knife into the point of selection, and the fluid flows. Now for the first case.

Mrs. B., married four years, had one child four months ago; no miscarriages. About a month after her confinement she began to have pain in the hypogastrium, and shortly afterwards pain and difficulty in micturition, and constipation. On April 4 she was admitted to "Martha." Her bowels then had not been opened for a week. They acted freely after a dose of castor oil. Temperature in morning 100·8°, in evening 101·6°. The lower part of the abdomen is occupied by a hardness, somewhat tender, nearly of the shape and size of a four-months' gravid uterus, but not of the same feeling. There is comparative dulness on percussion over it. The pelvis is occupied by a globular elastic mass. The cervix uteri is with difficulty reached by pressing the finger between this mass and the pubes. The uterus is above the pubes. The probe passed into it enters two inches and a half, and it is deflected to the right side, the fundus being situated about four inches above the right Poupart's ligament. The tumour in the pelvis makes the perineum bulge, and the rectum at the anus is partially everted. The tumour was opened per vaginam by incision in the mesial line when about a pint of slightly turbid serous fluid escaped, and the hypogastric swelling disappeared. Next day the temperature was 99·8°, and afterwards soon normal. Slight bloodstained discharge went on for a few days. Ten days after the opening of the collection there was to be found only induration behind the uterus, which was fixed. She left the hospital feeling quite well.

Local peritonitis of any kind, or perimetritis, is not a rare complication of a uterine fibroid or of a small ovarian tumour; and the next case which I shall read to you is an illustration of this disease. The case, I admit, is not so clear as the one just related to you, about which there could be no doubt; but I have scarcely any hesitation as to the cause of the conditions in the large serous collection, whose history I have now to read. There was never any evidence of the existence of a special sac enclosing the serum; indeed, the whole clinical evidence tallies only with the presence of a serous perimetritis of an extensive kind. The basis of the disease was, no doubt, a tumour of the pelvic organs, which was not discovered until late in the history of the case. You will observe that during its progress the urine suddenly became albuminous, and bloody stools were passed. These occurrences were simultaneous with diminution of the serous accumulation, and were, at the time, supposed to arise from discharge of the serum through the bladder and through the rectum. This is, however, only a supposition. I am indebted to Dr. Church for this case, having been consulted by him repeatedly in regard to it.

L. M., a virgin, aged eighteen, healthy-looking and well-nourished, was under treatment three months before admission for pain in her right side. Nine days before admission it returned, and has been getting worse since, and her attention has been drawn to a swelling in the lower belly. Pulse 120; temperature 101°. The lower half of the abdomen is excessively tender, especially on the right side, and it is occupied by a large tumour, which protrudes in the middle. The tumour is dull on percussion, with some resonance in the flanks, especially in the left. It rises to an inch above the umbilicus. The uterus is found to be low down, its cervix pointing forwards. The roof of the vagina is not hardened, and the tender swelling above can

just be felt through it. The catamenia are regular, profuse, not painful. Micturition very difficult. The day after admission she was tapped by Mr. T. Smith, and a pint of clear brownish serum drawn off; it became nearly solid on heating. This operation relieved her pain. The day after, pulse 100; temperature 99°. Eight days after the operation, pain and fever returned, but soon subsided. On the ninth day after the operation, the urine contained pus and albumen (half). In a week afterwards the urine was again normal. Two days after, pus and albumen were again found in the urine. She had bloody stools, with diarrhœa for a day. All this time the tumour was gradually diminishing. Seventeen days after the tapping it was found that the abdominal tumour was gone. Dulness in the hypogastrium extends two inches upwards from right Poupart's ligament. The uterus is high up, and far back in the pelvis. Above it, in front of it, on its right side, and just accessible by the tip of the examining finger, is a rounded tumour of the size of an orange, displaceable, but not freely mobile nor presenting distinct indications of connection with the uterus. She was discharged in good health.

I now come to the last subject of this lecture—Remote Perimetritis. This kind is not in the same category with adhesive, serous, and purulent perimetritis. Each of these kinds may be remote. There are remote inflammations of serous membrane, well known in female pathology, which are produced through or in connection with a constitutional affection, as septicæmia. The remote perimetritis we are now considering has no such origin or history. It is analogous to the remote parametritis, upon which I hope to lecture soon, and whose history is better known than that of remote perimetritis. In remote perimetritis the inflammation was at one time continuous with the pelvic peritoneal inflammation. The pelvic peritoneal inflammation may have disappeared while the inflammation persisted in a remote region;

or the remote inflammation may co-exist with the persistent pelvic peritonitis. The best example I have ever seen of the remote perimetritis, where all inflammation of the uterus and its neighbourhood had disappeared, occurred in one of the clinical wards of the Royal Infirmary of Edinburgh, and I was called to it by the late Professor Laycock. The history of that case showed distinctly that the peritoneal inflammation which persisted had originally been part of an extension of a perimetritis after delivery. When I saw it the uterus was mobile, and the roof of the pelvis was soft and not tender. The only disease was a rounded swelling containing fluid, situated below the navel, and to the left side, and which produced the constitutional symptoms of suppuration. The prognosis of the case was favourable, and it ended as had been predicted. The abscess burst into the intestinal canal and suddenly disappeared, leaving behind it only local hardness.

I shall conclude my lecture by giving you an example of remote perimetritis, coming on many weeks after an unfortunate confinement and imperfect recovery, where the inflammation extended as far away as the umbilicus, but maintained its continuity with similar inflammation in the roof of the pelvis. This case is remarkable for many reasons. It is rare; it occurred long after the liability to perimetric attacks following delivery had ceased to be dreaded. It caused severe constitutional symptoms, but the local symptoms were of the slightest kind; yet the physical examination discovered abundant evidence of the local disease. The patient was the wife of a physician, and was very carefully watched. The evidence of a large tumour excited great alarm, from the difficulty of being satisfied as to its exact nature.

The history of its origin and of its complete disappearance leaves no room for entertaining any view of it, other than that it was a case of remote adhesive perimetritis. The

tumour could be handled freely, and in every part of it there was resonance on percussion. I here give you only a sketch of the case.

Mrs. M., aged thirty-six, has had, since her marriage at twenty years of age, nine children and two miscarriages, and was confined on May 25 of her tenth child. Had hæmorrhage beginning an hour and a half after the birth of her second child; labour natural. Tenth child weighed ten pounds and a half. After the birth of the child a drachm of ergot was administered. Fever supervened on the second day, and was subdued by the liberal use of salicylic acid, which at the same time produced very painful symptoms. On the tenth day after delivery I was called, and found her feverish and suffering from occasional nausea. The uterus was large, rising nearly to the umbilicus, but not tender; the lochia not offensive. Ergot was administered, and the following day a rounded decomposing clot of blood as big as an orange was expelled. The uterus gradually assumed its proper dimensions. She suckled her child till near the end of the second month. About this time she went out driving more than once, but her temperature never descended to its normal condition. Then she was suddenly seized with the perimetritic disease. It was announced by giddiness, and severe and persistent bilious vomiting, slight acceleration of pulse; no further rise of temperature, no abdominal pain or tenderness. Some diarrhœa, weakness, prostration, and emaciation came on, and gradually increased. Professor Gairdner, who now saw her, considered her disease to be an indistinctly defined swelling in the hypogastric region, the result of an inflammation having its origin in the pelvis. I again visited her on the sixty-seventh day after her confinement. The whole lower half of the abdomen was occupied by an ill-defined, moderately hard, slightly tender, swelling, not dull on percussion, evidently formed by the matting together of the pelvic viscera and superjacent intestines as

far as the level of the umbilicus. The uterus was fixed, and slightly tender hardness surrounded it. She was kept in bed, and the abdomen was anointed with iodised oil. She slowly recovered. Before six weeks had passed from my visit, the temperature had resumed and maintained a normal condition, and she began to put on flesh. After some more weeks no trace of the abdominal tumour could be discovered on the most careful examination. Since then she has had another child without any trouble or alarm.

LECTURE XXII.

ON KINDS OF PARAMETRITIS.

Parametritis, or inflammation of the cellular tissue around or in connection with the womb, is one of the most important subjects in gynæcology. I can only, in accordance with the cases that I have to consider, go over a very small part of this great subject. Parametritis may begin and end during pregnancy, and give rise to great difficulties in diagnosis when it is pelvic. Of this I have seen an example. But in pregnancy it is very rare. It is characteristically a disease of the puerperal and of the unimpregnated states. There is a kind of parametritis which I do not consider at all, and which is observed in cases of septicæmia or pyæmia, or what are ordinarily called cases of puerperal fever. This parametritis is erysipelatous in its nature; it is diffuse, and it is not in its general characters like ordinary inflammation. There are pathologists of eminence who regard all kinds of parametritis as essentially the same, differing only in degree. In the meantime, at least, I do not hold that view.

The kinds of parametritis are phlegmon, abscess, gangrene; and these again may occur in different forms. You may have a chronic parametritis, a chronic phlegmon, ending in the production of indurations, which, when cut into, present a hard, dense, fibrous structure, the interstices of the fibrous tissue being filled up with fat. These chronic, hard, masses are most frequently observed at one or both sides of

the uterus. They sometimes, maintaining their hardness, atrophy, like fibrous tissue the product of inflammation in other situations, and may produce hydronephrosis by compression of the one or other ureter; as well as fixation of the uterus in abnormal positions.

Parametric phlegmon is a common disease. Like all forms of parametritis, it is most frequent in the close neighbourhood of the uterus, and especially on either side of the cervix, where there is plenty of cellular tissue to be the subject of the disease. But a parametric phlegmon, as I shall presently explain to you, may be remote; any form of parametritis may be remote; and my lecture to-day is chiefly devoted to remote parametric abscess. Before I leave the subject of parametric phlegmon I shall still further explain to you what it is. It is that kind of tender swelling and hardening of cellular tissue around the womb, or in connection somehow or other with the womb, similar to what you see elsewhere around an inflamed gland or around a carbuncle; and which, when the inflammation ceases, or when the carbuncle disappears, melts away, without suppurating. That is called, in the case of the uterus, a parametric phlegmon: it is common. An ovariotomist occasionally, but very rarely, sees this. In the post-mortem theatre it is extremely rare distinctly to see it, for it is not a fatal disease. An eminent ovariotomist, describing parametritis, not in the pelvis, not forming a pelvic tumour to be easily reached by the finger passed into the vagina, but surrounding the brim of the pelvis, uses these words:— "Looked at from above, the swelling of the pelvic soft parts was such that three fingers only could be pushed into the cavity, instead of the whole hand with a big sponge in it as is usual." Here was parametric inflammation in a woman who was subjected to ovariotomy, and who never had an abscess; but all this great parametric phlegmonous swelling disappeared, just as the great hard

swelling around a carbuncle disappears, without any suppuration.

Parametric abscess, which is the chief subject of my lecture, may be a degenerated or an advanced phlegmon, or the case may be one which has run on to suppuration at once; and I shall give you examples of these courses in different histories. But I have said that it was chiefly remote parametric abscess that I was to lecture on, and this leads me to consider the subject of the extension of parametric inflammation—a most important subject in practice. After delivery, for example, or after a surgical operation upon the uterus, the organ gets inflamed; all the cellular tissue around it, especially on each side of it, may become swollen, hard, and tender. The inflammation extends, and the directions of its extension are very important for you to know. The most frequent is along the pelvic brim towards the psoas muscle, and further on towards the kidney, or even around the kidney. It does not extend downwards towards the vulva or ano-perineal region. It rarely goes down the thigh, flowing over the brim of the pelvis in its course, or through the obturator foramen.

Pelvic abscess, as distinguished from pelvic phlegmon, extends frequently downwards into the thigh, and the abscess finds its way among the great muscles of the limb, sometimes even far down. An abscess may spread into the iliac fossa. There is no direction in which it may not spread; but I believe that the phlegmon, as distinguished from abscess, rarely spreads, except, as I told you, upwards along the psoas to the kidney, or forwards, which I did not tell you, along the round ligament to the inguinal canal. Abscess does not extend downwards along the vagina towards the vulva and ano-perineal region, its progress in this direction being probably prevented by the pelvic fascia. Now, these spreadings may be either mechanical, or what we may call, meantime, vital. The mechanical form of spreading some

ingenious pathologists have very wisely tried to elucidate by experiment, injecting fluids into the parametric cellular tissue, and observing how the fluid goes, to find out if that accounts for the spreading of abscess or of phlegmon. These experiments have not come to much, and I shall satisfy myself to-day by giving you examples of the two kinds of spreading—examples which, I think, prove that there are two kinds. The spreading of inflammation so as to affect the inguinal canal, and the disappearance of inflammation everywhere else except in the inguinal canal, is a spreading of inflammation which I in the meantime call vital, not mechanical. No experiment has ever illustrated the running of parametric fluids along the course of the round ligament. Besides, phlegmon, without abscess, may advance into the cellular tissue in the groin, and that while elsewhere, except in the inguinal canal, the inflammation is resolved. I take, as an illustration of the mechanical form of spreading, the advance of matter down into the thigh. That appears to me to be purely mechanical; and one reason for thinking so is that I have very rarely observed the spreading of the phlegmon or mere inflammation in this direction. I have often observed the mechanical forcing of an abscess down into the thigh, and that is purely mechanical. The matter, not finding vent otherwise, in some cases is urged down into the thigh, and sometimes passes round the head of the femur and gets into the hip-joint, and so produces very dangerous conditions. Sometimes it passes through the great sciatic notch into the buttock. The free or easy progress of pus in a newly-found route sometimes explains the diminution of an abscess while yet not opened, either spontaneously or artificially. Of this an illustration occurred lately in "Martha." A psoas parametric abscess following delivery was expected, after much delay, to open spontaneously in the groin. Consultation was held with Mr. Smith to consider the desirability of immediate evacuation, the constitutional symptoms of suppu-

ration being urgent; but delay was decided upon, in consequence of the depth and difficulty of reaching the abscess. Presently the prominent part of the abscess grew smaller, and this change almost shook our belief in the diagnosis; but the change was soon explained by the appearance of signs of the extension of the abscess through the obturator foramen to the upper and inner part of the thigh.

I must pass now from the consideration of these two forms of spreading—of inflammation and of abscess—the vital form and the mechanical form; and I will give you an illustration, that occurred in "Martha" not long ago, of inguinal parametritis.

S. S., aged twenty-five, has had three children, the last born four weeks and four days before her admission into the hospital. She got on well till a week after her confinement, when she had a prolonged rigor. Shortly after this a lump began to appear in her right groin. At first it gave her little trouble, and a fortnight after her confinement she left the house. Two or three days after this exposure the lump in the groin began to increase and be very painful. On admission there is found, extending from near the right anterior superior spine to the body of the left pubic bone a prominent pear-shaped mass, the smaller end being near the iliac spine. It feels as if filled with fluid. At its broadest it is two inches and a half, measuring upwards from Poupart's ligament. The uterus, and all that can be felt per vaginam, is soft, mobile, and healthy. Only, in the right anterior quarter of the pelvic brim, pressing high up, the finger meets fulness, produced by the above-described swelling as it overhangs the horizontal ramus of the right pubic bone. The abscess was opened with antiseptic precautions and dressed. The finger, introduced into the cavity of the abscess, found it to be limited to the region of the external swelling. The discharge soon dried up, and the patient rapidly recovered.

This case of inguinal parametritis is an example of spreading to the inguinal canal, indisputably vital. When she was examined, on admission to the hospital, there was no trace of any disease about her womb. The disease began, as you observe, a week after delivery, and remained for a considerable time evidently in the state of a phlegmon; and then she went out. The effect of the exposure was to increase the inflammation and produce suppuration. It was an inguinal parametric abscess, dependent originally upon uterine inflammation, which, when we saw her, had entirely disappeared—a remote parametritis.

I have told you that remote parametritis may affect the region of the psoas muscle, or may affect the suet. The case which I am to read to you is an illustration of remote parametric abscess which maintained to the last some connection with the uterus. It is an example of a kind of disease that is sometimes very puzzling, as I shall presently explain to you. The abscess did not mature and burst till about seven months after the woman's confinement: so chronic was it.

Mrs. R. S., aged twenty-seven; has been married for seven years, and had four children: no miscarriages. Her last confinement was six months before admission to "Martha." It went off easily; but three days afterwards she had shiverings, and has not been well ever since. Now she is exhausted and emaciated, has a quick pulse and a high temperature, both of which rise in the evening and are accompanied by ordinary hectic symptoms. Catamenia have not returned since confinement. She lies on her right side to save pain. The right thigh retracted fully forty-five degrees. Micturition frequent and painful; urine acid, and contains a very little albumen. Complains of great pain and tenderness in the right inguinal and hypogastric regions, and shooting down the right leg. These pains have been getting worse ever since her confinement. The lower part

of the right side of the abdomen is occupied by a rounded tender hardness, dull on percussion, extending from the right side of the right pubic bone in the direction of Poupart's ligament, and upwards into the right flank, where its distinctness is lost. It enlarges as it approaches the crest of the ilium. The uterus is in its natural situation, but fixed. The right side of the pelvis, and so high as to be reached with difficulty, is occupied by a tender hardness. She was kept in bed, well fed and cared for, and constantly poulticed. Three weeks after admission, and about seven months after her confinement, relief came by discharge of pus through the already irritated bladder. The tender swelling immediately diminished. The pus flowed freely. The retraction of leg gradually yielded. A fortnight after the discharge of pus began she could keep her leg extended. In a few days more the lump in the right side could not be discovered. The discharge of pus ceased. Two months after admission, and between five and six weeks from the commencement of the evacuation of the abscess, she was discharged quite well.

Here is a case of psoas and iliac abscess, the inflammation beginning three days after delivery, and relief not coming till about seven months afterwards. In this case the abscess was not in the pelvis, the most common seat of the abscess; there was no intra-pelvic disease. The abscess was remote, but maintained its connection with the uterus—came down as far as the brim of the pelvis and to the uterus, so as to hold it fixed.

Some of the most important symptoms I shall now describe to you. She lay upon the affected side, and the case I am to read next to you lay in the same way upon the affected side, or inclined to the affected side. The decubitus is occasionally on the healthy side. Her thigh was retracted, and in this woman it was retracted to about half a right angle, measuring from the position in standing or extension.

The amount of retraction varies. Extension of the retracted thigh is almost impossible; it can be done, but it causes so much pain that, unless under the influence of chloroform, it would be cruelty to try to do it. It disappears soon after the abscess is discharged, and before it is completely healed. In my opinion it is not the result of neuritis, because there is no special pain along the course of the nerves, because there is no pain when the leg is at rest, and because it comes and goes with the disease; whereas neuritis might, as in a case we have had in "Martha" lately, continue long after the original disease had gone. There are cases where you have evidence of neuritis, but in the meantime it is my opinion that most cases depend upon inflammation or destruction of muscle—the psoas and the iliacus. Another great symptom is the emaciation and haggard appearance, which in some of these cases cannot be exaggerated, leading bystanders to form an unfavourable prognosis, in which you would also join if you did not know what this case, and others that you have seen, illustrates, that this haggard, emaciated, death-like condition disappears with extraordinary rapidity when the abscess bursts and the case begins to improve. Now, in many cases of this kind, mistakes are made from neglecting the remoteness of the inflammation, the inflammation sometimes being confined to the region of the psoas or the region of the kidney, while the region of the uterus, where the inflammation began, has become perfectly healthy. Mistakes also arise from the difficulty of understanding that the disease can be so chronic as it is in some cases, and as it was in the woman whose history I have just read, in which the abscess never pointed, and burst through the bladder seven months after confinement.

Another source of error is, that in some cases there is no great pain or tenderness in the region affected—the region of the psoas muscle; and frequently, as in the case I am presently to read to you, nothing to be felt. The inflam-

mation produces a flat swelling, which is covered by the bowels, and you may not feel anything through the bowels. The physician cannot find anything like a distinct abscess even if he happens to expect it. I remember well being called by two excellent physicians to see a case of this kind. It was many months after delivery when I saw the woman for the first time. The physicians had given up the idea that there was a psoas abscess or any abscess following delivery, for there was nothing to be felt. The woman was lying in bed, without much suffering, but quite helpless from the retraction of her thigh: and the question was one of diagnosis. The friends had become impatient, in consequence of the promises made by the physicians all having proved false. When I saw her I had no doubt, although I could make out nothing more than the physicians did, that it was a case of the kind I have been describing to you, and I had nothing to say but to recommend further expectation; and the case ended as the case I have been reading to you ended. The abscess at last pointed, as it usually does, in the groin, and the woman was very soon cured by Nature.

The case I have just read to you was a case of remote parametritis, but the parametritis was continuous with the uterus and fixed it. The case I am now to read to you is a case of remote parametritis without continuity. It is not a case of the ordinary kind of pelvic abscess; it is not a case of the kind that I first illustrated, inguinal parametritis; it is one of remote psoas abscess.

M. A. F., aged thirty-three, single, had a seven months' child seven weeks before admission to "Martha." Has never been well since. Catamenia appeared about five weeks after delivery. Bowels regular. Micturition natural. In evening, pulse 116; temperature 102·2°. Looks very ill, is worn and emaciated. Complains of pain in the right thigh shooting into the hip, and that she cannot walk. The right

thigh is drawn up, being flexed about fifteen degrees. The upper half of the thigh is rounded and swollen to at least twice the size of the other. The swollen part is tender, but no special hardness can be found in it. The slightest touch beneath Poupart's ligament causes acute burning pain down the inside of the thigh. No defined hardness can be felt above Poupart's ligament, but there is great fulness there and extending upwards on the right side of the belly. The uterus is not fixed nor tender; neither is there any hardness or tenderness around it. The right labium majus is swollen, being œdematous. She was put on a water-bed, ordered to be well fed, to have a morphia draught at bedtime, to have the lower abdomen constantly poulticed. Eight days after admission a pointing abscess was detected in the upper and anterior part of the right thigh. Next day it was opened with antiseptic precautions. About a pint and a half of fetid pus flowed. At the same time there was considerable hæmorrhage, apparently venous, and certainly not from the wound, which was made in thinned skin. The bleeding was arrested by pressure. Pressure in the region of the psoas and iliacus, causing gushes of pus, made it plain where the abdominal part of the abscess was. Similar evidence showed that this part was in a few days completely evacuated and healed; but the large abscess in the thigh, whose extent was very ill-defined, required careful strapping and bandaging to secure its evacuation and healing. Now, six weeks after the abscess was opened, and fourteen weeks since her confinement, there is scarcely any discharge. The woman is rapidly regaining good looks and flesh.

Here is a case in which you have a large abscess forming in the right lumbar region, the region of the right psoas muscle; not a pelvic abscess. How the pus found its way down into the thigh we can only conjecture, as nothing abnormal was to be felt per vaginam. The pus probably

advanced along the psoas muscle, and so got down into the region of the great internal muscles of the thigh. It did not pass through the pelvic excavation. This is an unusual route—a route into which it is forced, I believe, purely by mechanical circumstances; the pus burrowed because it found its easiest progress and accumulation by pressing downwards in this way. In this case there is also to be noticed the bleeding on opening the abscess. The bleeding made me regret that I did open it, because I think it probable we should have avoided this bleeding if we had let it alone; and in this case—I do not say in every case—I believe the opening would not have been delayed twenty-four hours. If the bleeding had been slight I would have thought nothing of it; but the bleeding was decidedly considerable, especially when you keep in mind the emaciated and exhausted condition of the woman. In this case I would remark to you what I have mentioned already, and what is described in the case—the evidence of an immense lumbar abscess; but no lumbar abscess could be felt on manipulating the abdomen. That, naturally, might lead to great mistakes were you not aware that it is not an uncommon condition, a large collection of matter present in this situation, but which cannot be made out by the examining practitioner's hand. You will remark in this case another peculiarity—that the pus was intensely fetid. This putrefaction of the pus is difficult to account for, for almost certainly there was no communication with the bowel, or with any viscus; and yet putrefaction occurred. This kind of occurrence forms a difficulty in connection with Listerian antiseptics. How did the pus putrefy without any route for admission of germs? The only explanation I can suggest is one that I have heard, namely, that while healthy tissues will not allow germs to permeate them, such morbid tissues as this woman had, separating bowel from the cavity of the abscess, did allow germs to pass. That is, however, a hypo-

thetical explanation. No doubt the fetid pus in this abscess led to great aggravation of the woman's symptoms. The putrid ichor was absorbed into the blood, probably in considerable quantity. This view is confirmed by a fact which Mr. Garstang pointed out to me—that on opening the fetid abscess (the fetor rapidly disappeared, lasting about a day and a half) improvement immediately followed, the temperature falling from 99·5° (up to in the evening 102·5°) down to natural, and that in a few hours; and only once rising (ten days after the evacuation) as high as 100·5°. And this rising was due to some intercurrent affection which we did not discover.

We have lately had a very rare case of this kind, a remote parametric abscess in the middle third of the thigh. Suppuration was long delayed, and when it did occur it was accompanied by violent fever. Continuity, apparently through the obturator foramen could at first be traced with parametric pelvic phlegmon on the same side, but no suppuration occurred there, and when suppuration came in the thigh, the continuity of tender hardness could no longer be traced.

Before concluding, I say a few words with regard to the treatment of these inflammations and abscesses. There is really very little to be said. The treatment of parametritis in all its forms is almost identical with the treatment of inflammation or abscess in any other situation—antiphlogistic; poultices; occasionally, in the phlegmonous form, the use of blisters; and lastly, the use of the knife. It is only on the use of this last that I shall here make a few remarks. All gynæcologists agree in discouraging resort to the knife in these cases. I have often seen the knife used in the manner which, when we speak of tapping, is called dry tapping; the practitioner, not recognizing the occurrence of parametric phlegmon, where there is no abscess; and thinking he will hasten the progress of a case by driving his

knife into it. But it is not the liability to mistakes of this kind that induces all gynæcologists to discourage opening parametric abscesses of all kinds; it is their clinical history, which shows that in the great majority of cases they are better let alone. These remarks, however, chiefly apply to pelvic abscesses, and there the danger of opening is far greater than in remote parametric abscesses, such as I have been going over to-day. The observation does not apply rigidly to remote parametric abscesses, for it is frequently advisable to proceed to evacuate such in order to hasten the progress of a case that might otherwise linger for a very long time. I advise you, however, to be sure that you have an abscess to deal with, and to be sure that it is what is called "thoroughly matured" before you interfere with it.

LECTURE XXIII.

ON PAINFUL SITTING.

Painful Sitting is the subject of this lecture. We have several cases illustrating it. In some of them, painful walking accompanies the painful sitting; indeed, in the last disease that I shall mention to you, painful walking is more important than the painful sitting. Painful sitting is as good a name for a disease as dysmenorrhœa is, and quite as distinctive; but painful sitting is not a disease, nor is dysmenorrhœa—both are symptoms, and the term is used merely as an artificial arrangement of a variety of affections, just as dysmenorrhœa is used. In both cases the designation is not a term of a pathological classification, but of what is called a nosological or artificial classification. The most common kinds of painful sitting are not to be considered to-day; only those that are observed particularly in women, and only those that are somewhat recondite. Such causes of painful sitting as an abscess of the vulva, an abscess of the perineum, tender caruncle of the urethra, an inflamed gland of Cowper, are very common; and in them nobody requires to hear anything said about the painful sitting—that is a matter of course.

The first special cause of painful sitting that I have to consider is inflammation—not affecting the external organs, not affecting the vagina, but affecting the deep-seated genital organs, the uterus and ovaries. This is not an infrequent cause; and the first case I am to read to you is a

good example of it, an apposite example for us, because the poor woman came to the hospital declaring that she could not sit—that was her complaint; for her, that was the disease. I shall read her case:—

M. C., aged twenty-seven; admitted November 16; married ten years; has had four children—the youngest two years old; two alive; the others died during teething. Has had no miscarriage. Catamenia began at thirteen years, and have generally been regular; nothing abnormal noticed about any of the later periods. About six weeks ago she was suddenly attacked with a severe pain in the right inguinal region, which has been present ever since when sitting. The pain is hardly felt at all when standing or lying down. This pain she ascribes to a kick on the belly; and I think it is a very probable explanation of it. About the middle of this term of six weeks she had a scanty thin brownish fetid discharge, which has since subsided, and is now imperceptible. It lasted for a week or a fortnight. The pain is identified by pressing on the perineum, and subsequently by pressing the uterus digitally. The cervix uteri is nearly in its natural situation, patulous and hard, admitting the finger easily. It has an irregular hard internal surface. The uterus is fixed. The whole roof of the pelvis presents hardness, or dense fulness, which is tender.

Now you can easily, from the record, make out that this woman has cancer of the neck of the womb. She knows nothing about that, and I believe does not suspect it; she thinks her disease was caused by the kick she got from her husband, and as for her the disease is painful sitting, I think she is quite right as to its cause. Somehow or other this kick was connected with an attack of perimetritis, an attack of inflammation around the womb, inflammation affecting the serous membrane, inflammation leading to the fixation of the uterus which we

found; and so far as her disease consists in painful sitting, this inflammation is the cause of her disease. Attacks of inflammation, apart from violence, are quite common in connection with cancer of the womb. This woman's sufferings are caused by inflammation around the womb in the early stage of cancer of its neck. Now, I wish you to observe how clearly in this case the nature of the disease was made out. Firstly, a cancerous uterus is not a tender one. This woman's uterus was not tender where it was cancerous; it was the neighbourhood of the uterus that was the seat of the tenderness, the seat of the inflammation. When the perineum of this woman was pressed by the hand, while she was lying on her side, she at once recognized the pain of sitting. She felt the same pain as when the perineum was pressed upon by the seat. She had not the pain when she lay down or when she was standing. Following up the pain, the finger was introduced into the vagina, and found the same pain was produced by pressing upon the inflamed and tender parts of the womb. There could thus be no doubt of the nature of the disease. Of this part of her disease—which, unfortunately for the woman, is not the major part—she will get rid by suitable treatment, especially by continued lying in bed. She is, indeed, already nearly well.

In connection with this case I shall state the theory of this painful sitting; and a very easy experiment explains it. It is not generally recognized that the bowels are pressed upon by sitting; but it is a fact, as this case illustrates. When a woman sits upon a seat, the pressure upon her buttocks, even although the deeper parts are protected by the tuberosities of the ischia, communicates pressure to the deepest parts in the pelvis; and if those parts are tender, pain is the result. The experiment that I alluded to, as demonstrating what I have just said, is to place the hand upon the hypogastrium while the perineum is exposed. If you press by it in the direction of the axis of the brim, you

push down the perineum and the hips. A very slight pressure upon the hypogastrium makes the perineum bulge, makes the buttocks descend. Of course, when the hips are pressed upwards, or the perineum is pressed upwards, you have an influence which is, in like manner, communicated back to the hypogastrium; and thus you have pain if the parts are inflamed. This is illustrated in many cases of ovaritis, and in metritis of all kinds. This part of painful sitting is a separate thing from the injurious influence of sitting. That I am not speaking about. The injurious influence of sitting is a subject I may illustrate at some other lecture. What I am speaking of now is painful sitting, and the injurious influence of sitting is a much wider subject than I am now considering.

I go on, now, to another set of diseases, connected with the coccyx, which diseases are not peculiar to women, but are, I believe, much more frequent in women than in men; and they have got a collective name, which is also an artificial, not a pathological name—Coccygodynia. Now, the pathology of this department of painful sitting is so far advanced that I recommend you to give up the use of this name except as a proper word to express pain in the coccyx, for which no further explanation can be given. That is to say it is a neuralgia; perhaps not a pure or simple neuralgia, but yet a neuralgia; and a neuralgia is in the majority of cases a disease of which no further explanation can be given. Indeed, many of the cases usually included under coccygodynia are not diseases of the coccyx at all.

This coccygodynia is not without its analogues. For, apparently in connection with some disorders of the stomach, the xyphoid cartilage becomes tender, and pressure on it or movement of it is painful; and this state sometimes causes alarm to the sufferer.

Occasionally the coccyx is the seat of inflammation; or its periosteum gets inflamed; and you have abscess around it.

Of that disease I have not seen an example, but I have seen enough to show me that such a disease may exist. I have, for instance, seen a periosteal abscess extending from the point of the coccyx to the base of the sacrum, the whole length, which shows that such a disease as inflammation and abscess of the coccyx may occur. There is no doubt, indeed, that it has occurred. But the commonest cases of neuralgia of the coccyx or of true coccygodynia, although they have tenderness, or rather sensitiveness, as a symptom, have no inflammation, no inflammatory tenderness. Now, this disease is common, and it is common in men as well as in women. I have seen cases of it in men, although I come very little in contact with that sex. In men it generally arises from constipation or some disorder of the rectum, such as hæmorrhoidal congestion. I may mention an example of it as it occurs in women. A young lady, in her first pregnancy, enjoying perfect health, was sent to me, only two days ago, by her husband, because she could not sit. When she came into my room she laughingly said it was an absurd complaint, but she could not sit. It was easy to make out that she had this tenderness—not inflammatory tenderness—this sensitiveness, rather, of the coccyx. Now, this disease is generally easily cured, or rather it goes away, and the treatment of it is scarcely worth describing. It is the use of laxatives, hot bathing, sedative applications. In a severe and persistent case you may try the hypodermic injection of morphia, and it has been said to cure the disease. Whether it has done so or not I shall not undertake to say; perhaps time would have cured it equally efficiently. The disease is essentially a come-and-go disease, and it is very difficult to judge in such diseases what is to be attributed to treatment and what to time, or to amelioration of general health. These are the commonest cases. Other cases, however, are not rare: they arise chiefly from injury, and they seem to affect the sacro-coccygeal joint, and still more its ligaments,

and the sacro-sciatic ligaments especially. Of this affection I shall give you an excellent example.

Mrs. L., aged thirty-two, married for two years; had her first child nine months ago; during the second stage of labour she had intense suffering, especially during pains, in the region of the coccyx, where she has still all that she complains of. Ever since her confinement she has had the pain very severely during defæcation; but now it is less than it was at first. When she began to get up, sitting brought on the pain, and she had to give it up entirely; but lately the pain in sitting has diminished, and now it is entirely gone. On examination the coccygeal region is easily identified as the seat of all the pain. There is no swelling nor dislocation of the bone. Pressing on it increasing flexion, as in sitting, causes now no pain: it did so at first when the parts were more tender; but extension so as to bring the least tightness of the sacro-sciatic ligaments brings on the well-known pain. Pressure on the ligaments themselves, to tighten them, also induces the pain.

This is a very clear case, and the disease is gradually disappearing. The only pain that remains is produced by stretching the sacro-sciatic ligaments. I have no doubt that the disease in this woman is some sort of inflammatory rheumatic condition of these ligaments. Neither have I any doubt that she will get quite well: she is in the process of getting well. You observe that, in this case, the disease was brought on by injury sustained during labour. This intelligent woman's account of the second stage of her labour, and of the pain in the coccyx, leaves no room for doubt that then the disease was produced. The pain she suffers now is the same she suffered then—only much less. This case I recommended to be treated by hot bathing, by keeping the bowels easy so that large masses of fæces might not descend and cause great extension of the coccyx. No more treatment was demanded, because the case was pro-

gressing slowly in a very satisfactory manner. Should it prove obstinate, I should be inclined to recommend to this woman to have the sacro-sciatic ligaments divided at their attachments to the coccyx—an experiment which is well worth trying. It has frequently failed to cure this disease; but then its failure may be because the treatment was used in cases for which it was not appropriate. This disease is only in that condition of progress in which we are differentiating the various kinds of it. You are not therefore to condemn this treatment altogether, on account of its failures, till the disease is much better known and the proper cases for this operation of dividing the ligaments are made out; if there are any proper cases. Its success in some cases surely indicates that there are proper cases. I should be inclined in the case of this lady to recommend its trial if the disease proves inveterate.

Before I pass further on, I shall make a statemant to show you how imperfect yet is our knowledge of this disease. An eminent author, calling this disease coccygodynia, which indicates the want of recognition of the various diseases included under that name, says that a characteristic of it is that while pressing upwards or from the outside is painful, pressing downwards or from the inside producing extension is not painful. The opposite was the condition of the patient in the case I have been describing to you, and the opposite is the condition I should write down if I were making such a general statement. I should rather be inclined to say that you had always pain from pressure extending the coccyx, pressing from within; only occasionally pain from pressure pushing the coccyx upwards, or flexing it by pressure from without, as was true of the earlier part of the history of our case.

I come now to another disease, of which we happened to have two examples in "Martha" almost at the same time—indeed, I think they were the same day—dislocation of

the coccyx. In these dislocations you have no pain, you have no tenderness; you have merely inconvenience which amounts to pain, inconvenience arising from the abnormal position of the coccyx, and which you will see admirably illustrated in the dislocation forwards which I am to read to you presently. It would surely be a great mistake to call this disease coccygodynia. When a man has a dislocated arm you do not call it omodynia; neither should you call this coccygodynia; it is dislocation of the coccyx. The first case, E. G., aged thirty-seven, was admitted into "Martha" for carcinoma uteri. She made no complaint of her coccygeal region till her attention was called to it. Then she described herself as aware of something wrong there; and this had troubled her only since her last confinement, when she was delivered by instruments at the end of the seventh month of pregnancy. The coccyx is dislocated backwards, and is in a state of great unnatural flexion; it is only slightly mobile. This case, you see, is like the last, a traumatic case; but it is also very unlike the last, for in this case you have no kind of inflammation; you have merely a dislocated coccyx. Dislocation is recognized by feeling externally the base of the coccyx, by passing the finger into the rectum, and feeling internally the point of the sacrum. Two parts which ought to be in contact are separate from one another, and the dislocation is backwards. In this dislocation backwards the coccyx is flexed. In this case nothing was done. It is recommended by some authors to reduce such an old dislocation. But it is a different thing to do it. Indeed it cannot be done. At the time of the accident, possibly, it could easily have been done; now the attempt would be vain. The hold you can get of the part is so slight that you can exert no adequate pressure to tear up all the connections that are now formed in the situation of the sacro-coccygeal joint. Reduction, I believe, if it is ever to be successful, must be done either after dividing the

connections between the sacrum and coccyx, or at the very time of the accident.

The next case I have to give you is a case of dislocation forwards, and you will see that this is a much more important accident. The dislocation forwards in the case I am to read was traumatic, as in the last case. Mrs. N., aged thirty-eight, married for three years and a half. Has had three children. During her last confinement she required some extraordinary assistance, which she could not describe to make intelligible. Ever since that time she has had pain in what she calls her "tail." The pain is now almost gone, and she would say nothing of it were it not that sitting brings it on; and she wishes to have her power of sitting restored. On examination, the coccyx is found in a position of extension, pointing downwards and projecting against the skin; it is not tender. Further examination finds its motion very restricted, and that it is dislocated forwards. You can easily understand that dislocation backwards with flexion is a comparatively innocent matter; but if you have dislocation forwards, and the coccyx pointing down upon the perineum, as it did in this lady, pain and aching will arise from sitting upon the point of the coccyx stuck into the seat, if she sits otherwise than upon a single ischium. All patients suffering from this disease or any of the allied diseases sit in a peculiar manner upon the edge of the chair, resting upon one ischium (next the chair). In this way they escape the pressure upon the perineum. Surely it is extremely desirable that this very great disability should be cured. In this case I made no recommendation but one. The only thing that could cure this woman was to remove the bone, or at least to set it free: to put it into some other position. I should think the simplest matter would be to take it away altogether. In a case like this, did the woman not get accustomed to the state in which she is, I should certainly have no hesitation in dividing the connections of

the sacrum and coccyx, putting the coccyx into a more convenient position, or removing it altogether.

Removing the coccyx altogether has been recommended for coccygodynia, in a general or comprehensive sense, and I am not to advise you never to resort to it. As little do I advise you to resort to it; because, so far as I know of it—and I do know some cases—it has proved an extremely unsatisfactory proceeding. In the case of this lady, I have no doubt it would be satisfactory, and cure her with very little risk, almost none. As I have already said, the various conditions of painful sitting are not sufficiently recognized to enable us to say that coccygodynia is to be treated in any, as yet undefined, class of cases by excision of the coccyx. This is not a case of coccygodynia; it is a case of dislocation of the coccyx, with manifest easily accounted for painful sitting, and with a manifest cure to come from cutting out the offending bone.

I now come to do little more than mention a very interesting case of fracture of the sacrum and dislocation of the lower part, which made sitting impossible, and produced difficult walking for a long time. M. B., aged forty-seven. Eight months ago she fell from a ladder some twelve feet, on her sacrum. She was confined to bed in consequence for a fortnight, having been picked up senseless. After this she was able to walk, but not so well as formerly. She has had difficulty and pain in defæcation ever since. Complains of pain in her sacrum. The upper bones of the sacrum are normal, but at the junction between the third and fourth there is a sharp angle—a little more than a right angle—formed by the unnatural projection forwards of the lower two bones of the sacrum and the coccyx, which latter is itself movable. The uterus is in normal position and direction, but with mobility much impaired. The right side of the pelvic cavity is natural, but on the left and behind is a dense nodulated hardness. Per rectum, the angle of the sacrum can be distinctly felt, the fourth sacral vertebra

being dislocated forwards, the dislocated portion being directed to the left. The rectum runs to the right of this part of the sacrum, and the induration above mentioned apparently starts from the left side of the sacrum, though part of it is in front of the rectum between it and the vagina. This is a rare accident—the only one I ever saw of the kind. Were it not recognized, the physician examining the internal organs might be led to form very erroneous ideas as to the nature of the woman's disease; but there can be no difficulty, when we recognize the fracture and dislocation of the sacrum, in ascribing the morbid conditions internally to the fracture and bad healing of the bone. It is evident that the fracture led to some effusion on the left side of the uterus, and some adhesions in Douglas's space, causing hardness. This accident, were the woman young, might produce very great difficulty in delivery, and it would require careful consideration, if a woman having it contemplated marriage; still more careful consideration if she were in the family-way. On that subject I have not time to enter.

The next case I have to mention to you is a still rarer one: not fracture, but dislocation of the spine upon the sacrum—a case of spondylolisthesis. This word does not indicate the region of the affection, but its use is confined to the conditions I am to describe. There is no fracture here, for you have a joint, and the bones slip upon one another. The first bone of the sacrum and the last lumbar vertebra can be mutually dislocated without much fracture. There might have been fracture, but we found in this case no evidence of it.

E. H., aged sixty-three, admitted for carcinoma uteri. She had a considerable time ago a fall from a trap-door on her back, about fourteen feet. She was stunned, and afterwards could not walk for many days. Ever since she has had pains all over both legs, but no loss of sensation or motion. At or behind the first bone of the sacrum is a prominence, continued downwards into a strong sacral convexity retiring

within the fold of the buttocks, the sacrum being unnaturally curved forwards as a whole. The lumbar spine is in a state of slight lordosis. Nothing additional is made out per vaginam. The conditions indicate spondylolisthesis or dislocation forwards of the spine upon the sacrum. But the case may have involved fracture, which is not an essential part of spondylolisthesis. In this the dislocation is rather the result of a peculiar deformity of a vertebra, with elongation of the laminæ, than the result of mere displacement with or without the fracture.

Before concluding this lecture, I have a few words to say upon a condition of the joints of the pelvis which is rare as a disease, and which interferes with sitting and walking, especially the latter—that is, relaxation of the great essential or intrinsic joints of the pelvis, the symphysis pubis, and the two sacro-iliac joints. These joints in the end of pregnancy become naturally juicy and loose, and a considerable increase of motion is permitted in them. The loosening of these joints very rarely becomes morbid. When morbid, it has been found sometimes, in a few recorded cases, to be so great as to produce hopeless lameness. The joints have been so relaxed, and present such an amount of mobility, that by no contrivance can they be fixed so as to enable the woman to stand. Cases of that kind are among the greatest of rarities, but cases of slight extraordinary loosening are not very rare. They are recognized or diagnosed with great difficulty. You are led to suspect the existence of the condition by finding that the disease dates from pregnancy; it may be not from the first pregnancy. The last case which I saw was a case beginning in the second pregnancy. The next thing that leads you to suspect the disease is to find pain complained of in the symphysis pubis, or in what the patient calls "the bone" in the mons veneris, and in the two sacro-iliac joints, or in one of them. The pain in the symphysis pubis and in one of the sacro-iliac joints almost

invariably go together, but both sacro-iliac joints are not invariably affected. What is the difficulty of recognizing this disease? There is no difficulty in a case of extreme relaxation. Then, the woman can find the disease out for herself; but in a case of slight relaxation it is a matter of great nicety, and you have frequently to put the woman through a variety of evolutions before you can satisfy yourself that these joints are moving. I have found it generally vain to try to make this out in the symphysis pubis, partly on account of the disagreeableness of the proceedings. The proceedings are extremely indelicate, but only in a certain sense, for there is nothing truly indelicate that forms part of a duty; but they are extremely unpleasant, and the word "indelicate" implies a part of the unpleasantness. Besides, when I have attempted to diagnose the movement of the symphysis, I have been extremely ill-satisfied. In the case of the sacro-iliac joint there is no embarrassment; the difficulty is in being quite sure of the movement. In a healthy woman you can make out no movement or almost none. You start from that. If, then, you find distinct movement, you may be sure that there is this morbid condition. This distinct movement is best ascertained by placing the left hand below the sacro-iliac joints (the woman lying on your hand), and pressing one or other haunch-bone by the right hand, while the woman lies quite still on her back: the left hand, feeling simultaneously the spines of the sacrum and of an ilium or of both ilia, makes out the movement of the one on the other. I advise you not to be sure you make it out till you have perfectly satisfied yourself. Supposing you make it out, is there anything to be done? Like many others, this disease is fortunately often spontaneously cured. It is natural to expect that, as in a cow, the moving huckle-bones get fixed again after parturition, so in a woman the movable haunch-bones will get fixed after parturition; and the same may happen more slowly in the extraordinary

or morbid cases I am describing. In such cases I have always encouraged a woman to walk, to brave out the pain if she can, because the irritation produced by the walking may conduce to the refixation of the joint. Cases of this kind do get better. The bones do get fixed again. Until they get fixed there is one means which is of great value, that is, a very firm bandage around the pelvis. You give an artificial fixedness. Now, you will find it very difficult to get a woman to wear this bandage, because it is extremely unpleasant in itself; and it is only after she has found the advantage of it that she will consent to wear it. The bandage must be made, not of ordinary bandage materials, but of horse-girth stuff. This is put round the pelvis, and strapped as tightly as the woman can endure; and if it is to be of any use it must be inconvenient, because, in order to be fixed upon the proper part, it must descend to a considerable extent upon her limbs—that is to say, it must come down to, or even a little below, the trochanter major, —and this makes walking very disagreeable. I have seen cases in intelligent women where I can have no doubt of the real advantage of this bandage—where, indeed, the woman could not walk without it. In many it does good as a placebo, or as giving a feeling, though a false one, of security.

Painful sitting and walking frequently arise from a rheumatic condition of one or of both sacro-iliac joints, in men as well as women. This is much more common than pain from increased and unnatural mobility; and it may have no connection with a previous pregnancy and parturition as the increased mobility has. And you must keep in mind that this great pain is often erroneously interpreted as being a symptom indicative of uterine disease—catarrh or displacement—while it is really a local joint affection. Its occurring in men is instructive; and instruction is needed, for mistake leads to a bad management or injurious practice.

LECTURE XXIV.

ON ACHING KIDNEY—PYONEPHROSIS—STRICTURE OF URETHRA.

The first subject of this lecture is Aching Kidney. I shall read to you no individual case of this disease, because, in the class of patients that come to St. Bartholomew's, it is not considered grievous enough to secure a bed in the hospital. Among the better classes, where diseases are often unjustly appraised, it is often regarded as of the greatest importance and interest. We have had many cases in "Martha" of aching kidney, but in them this affection has been merely an epiphenomenon, or a part of other diseased conditions.

This disease is sometimes, both in men and women, very easily recognized. There are achings in cases of what is called floating kidney. The patient can put her hand upon the lump, and say, "Here is the pain," and there is no difficulty in recognizing the disease. But there are some cases in which the disease is difficult to identify. In pregnancy, for instance, right or left hypochondriac pain is very frequent. In many cases I have been able to be quite sure, from the history before and after pregnancy, that the disease was not to be classified in the vague way that is implied in giving it the name of hypochondriac pain, but that it was really aching kidney. In pregnancy you have opposite conditions to those in floating kidney in ordinary circumstances, for if pregnancy is advanced, you cannot get at the kidney to feel it and identify its position.

Here I may remark that, while the disease often occurs in pregnancy, yet some women who are liable to it do not suffer while in that condition. A patient, now under my care, has tender aching right kidney, which began fourteen days after last confinement. Before her recent pregnancy began she had had two attacks of it; but during pregnancy she enjoyed perfect health.

The disease in women is not a rare one, and its characters are the following:—One or other kidney is the seat of pain. It is not a neuralgic pain; it is a heavy wearying pain, deep in the side. It is in the region of the kidney, and in many cases (as I shall presently tell you) you can easily identify it as being in the kidney itself. It is not generally that kidney pain which is a familiar symptom of calculus. In such cases the pain is the pain of the pelvis of the kidney. You have in the region of the small ribs posteriorly a boring, or a nail-like pain. Patients with aching kidney generally point to the hypochondriac region, not to the back, as they often do in cases of calculus in the kidney.

This renal pain is frequently accompanied by pain in the corresponding lower limb, referred most frequently to the course of the sciatic nerve, sometimes to the course of the anterior crural. The pain is often accompanied (and you will find this to prevail throughout all the subjects of this lecture) by irritability—I do not say disease—of the bladder; and it is frequently accompanied by pain in the course of the ureter corresponding to the kidney affected.

The renal pain is not rarely present only during the monthly periods; and when it is present only during the monthly periods it may be classed with that disease, which is very ill-defined, called dysmenorrhœa. It should never be placed there, unless you wish to use the word dysmenorrhœa in a very wide sense. If we use the word as including aching kidney, we might as well use it as including headache—a use which would be in accordance

with what is extensively done by writers. This renal disease often eludes the examination of the physician, because it occurs, in many cases, only during the monthly periods. In all cases it is then aggravated. I do not think I have ever seen a case in which the patient did not volunteer the statement that the pain was worse at the monthly time.

Now, you naturally ask, What has the kidney to do with the menstrual function? And upon this interesting subject I shall make a few remarks before I go further. Embryologically, the urinary and the genital organs are closely connected. That you all know, and I have not time now to enter upon the embryology of the subject. As the genito-urinary organs become developed they get separated from one another, and their close connection does not strike the student of adult human anatomy, forgetting the anatomy of the embryo. But in the adult you occasionally find the proximity of the organs maintained. The kidneys are sometimes found in the pelvis, and cases are recorded where kidneys in the pelvis, maintaining their proximity to the genital organs, have been the cause of difficulty in labour. Now, not only have these two organs an embryological or developmental connection, but they have an intimate connection in pathology. Of that connection the disease I am now speaking of is an example; and I shall give you another example, merely mentioning it. A woman, after abortion or delivery at the full time, has an attack of parametritis. This parametritis extends; and a favourite extension, as everybody knows, is along the cellular tissue in front of the psoas muscle and up to the suet. Cases have been very carefully observed where there could be no doubt that an abscess of the suet was the result of inflammation of the womb—following an operation—following an abortion—following delivery at the full time. This is another pathological connection between these parts, and I

might give you more; for analogous inflammations are observed in the virgin. It is worth while to add that I have not distinctly traced the reverse morbid influence, or renal affections producing pain or disorder of the genital organs.

It is not usual to find both kidneys aching, and I guess—I can use no stronger word—that the left kidney is more frequently the seat of disease than the right one. You are not left in your diagnosis in all cases merely to identification of the seat of the pain, although that may be sufficient. Frequently in the region of the pain you can find distinct fulness; that is a very important physical condition, that I have not time to explain to you. It can scarcely be made out in a fat woman; but in many cases this condition of fulness over the affected kidney is easily recognized. In addition, swelling of the kidney or of the suet, or of both, is not rarely to be made out. The physical examination of the kidney is too much neglected. It is not in floating kidney only that you can feel the organ. In many women who are not nervous, yielding themselves freely to examination, and who are not fat, you can feel the kidney with distinctness; and in cases of this kind you can frequently make out, as I have said, that there is a swelling of the kidney or of the suet, or of both. There is also generally tenderness, sometimes great tenderness.

Now you can scarcely mistake this disease, in a good example, for any other. The diseases with which you are liable to confound it are pyelitis and calculus; and the diagnosis is to be made out mostly on the following grounds: In pyelitis and in calculus the pain is more incessant; and in pyelitis the disease may go on acutely with fever. Both these characters may be absent—and, indeed, are generally absent—in the case of aching kidney. In pyelitis and in calculus you generally have pus in the

urine in greater or less quantity; it may be very little. In calculus you generally have, in the history of the woman, blood in the urine; and this is generally connected with some violence in the way of exercise, such as riding in a rough cab, or having a fall. In the case also of aching kidney, exercise frequently aggravates the disease. You can easily understand that a woman taking rough exercise, as in an ill-built cab, will feel an aching, tender kidney irritated by the exercise. But this is not a very well-marked symptom. Most women who have aching kidney do not complain of exercise, although some do. Aching kidney is a disease of much less gravity, and more amenable to treatment than pyelitis or calculus.

The treatment is to be conducted on the general principles of the therapeutics of neuralgia or slight hyperæmia; and these two conditions are not so very remote from one another as may at first sight appear. A neuralgia sounds as if it were something quite different from a hyperæmic condition; but that has to be proved. The remedies I have found of most service in simple cases of this kind are tonic regimen and tonic medicines, especially iron, in the form of the tincture of the perchloride, combined with mild diuretics in small quantity, and especially the common sweet spirits of nitre.

Before I leave this subject I have to make a statement about the importance of this disease—a statement that gives it a greater importance in exceptional cases than it has in the general run. At present I have three cases under my care where aching kidney was easily diagnosed. In one of them there are occasional appearances in the urine of a small quantity of albumen. These occasional appearances of albumen are discovered by being looked for; and the looking for is stimulated by the occurrence of general ill-defined illness, or bad headache, or something of that kind, which leads you to inquire into the condition of the

urine in a woman who has aching kidney. In a few cases of aching kidney of this kind I have detected the repeated occurrence of albumen in the urine. It occurs in generally small quantity, but quite distinctly, and it occurs either without any casts, or with few. I have under my care at present a sufferer from aching kidney who recently became pregnant, who went on in pregnancy for four months, and then albumen appeared in her urine in small quantity. It appeared without any aching in the kidney, and it was not in the form or under the circumstances in which it causes very great alarm. It was a repetition of what had occurred long before her pregnancy, while her kidney ached severely. The albumen disappeared from the urine entirely in about ten days. She was then supposed, and supposed herself, to be doing remarkably well, when a miscarriage occurred. Just as the albumen had distinct connection with the aching kidney, so had the miscarriage. The miscarriage was caused, no doubt, by the death of the fœtus; the death of the fœtus was caused by disease of the placenta; the disease of the placenta was connected with a morbid or watery condition of the blood, which was probably present in this delicate woman in an exaggerated state. The disease of the placenta showed itself by the production of extensive yellow patches. These yellow patches are decolorized cotyledons, which have been thrombosed previously and rendered useless to the fœtus. The cotyledons in this woman's placenta became thrombosed one after another, until the placenta was reduced in useful area to such an extent as to lead to the death of the fœtus; and this thrombosis of the placenta had, no doubt, an intimate connection with the morbid condition of the kidney that I have been mentioning.

This condition of the kidney, with persistent or intermittent albuminuria, occurring in pregnant women, is not a rare condition, almost physiological or natural, and you are to distinguish it from the copious albuminuria, often

with acute nephritis, of pregnant and lying-in women, which is so frequently, or almost invariably, part of the great disease called puerperal eclampsia. I am not asserting that this disease does not form a minor degree of the same disease. I make no assertion about that; but to confuse the often considerable, and generally temporary, albuminuria I am now describing with the acute nephritis that leads to eclampsia would be a great error. In the pregnant woman I have been speaking of, the disease was temporary. It no doubt partly conduced to the death of the fœtus and the miscarriage, but there was no other harm to the woman, nor indeed the slightest alarm from any cause.

That is all I have to say upon the subject of aching kidney; and it brings me to the subject of Pyonephrosis. The patient whose case is now to be under consideration, so far as her kidney was concerned, might be truly said to be suffering from aching kidney. But to give such a mere nosological name to her disease would be an injurious proceeding, not doing justice to our intelligence. For her there was nothing but an aching kidney; but we could easily make out that the cause of the aching kidney was pyonephrosis. We do not call it hydronephrosis, because we found that the tumour, which I shall immediately describe, was full of pus, It did not fluctuate; but it presented the feeling of fluid all over. Pyonephrosis and hydronephrosis generally produce a lobulated solid tumour in one or other side of the abdomen, or nearly completely filling the cavity as an ovarian tumour does, with more or less extensive portions presenting the feeling of fluid; and when the tumour is tapped, you get out pus or a filthy fluid often with urinous constituents. Before I read the particulars of this case to you, I may premise that the patient came into "Martha" not for nephrosis, not for aching kidney, but for irritable bladder.

A. S., aged nineteen, was in "Martha" ward in October, 1876, with vascular tumour of the urethra. It was removed,

and she was discharged cured at the end of the month. In March, 1877, she was again admitted, with recurrence of the growths around the urethra and hymen. They were cauterized, and she was discharged relieved in April. In May, 1878, she was again admitted, and this time under my care. She states that a few days after leaving the hospital her painful symptoms returned, and are now worse than ever. She has pain and smarting on micturition, and has to pass water about every two hours. Four months ago she noticed a lump in her right side. It is gradually enlarging. Before she discovered the lump she suffered pain in the part for two months. It is constant, and though never very severe, has occasional exacèrbations. The mammary areola is of about the area of a shilling, and the mammilla not larger than in a male. In the right flank is a lobulated tumour, the chief lobe or nodule of which is just below the umbilicus, and two inches to the right side. There is a feeling of fluid contents; good resonance below the tumour, and a streak of imperfect resonance between it and the liver. Impulse can be most distinctly obtained between the renal region behind and the front of the tumour. Around the posterior two-thirds of the orifice of the urethra there is arranged, in a moniliform manner, a series of five crimson flat ulcers of about the size of coriander seeds. They are slightly raised, and have irregular, starred edges. They are supersensitive. The bladder measures five inches from the orifice of the urethra to the fundus, and is natural in point of sensibility and elasticity. The cervix uteri is very small; the probe passes into the cavity two inches and a half. There is no hymeneal obstruction. On May 9 the upper and right lump was tapped with a fine trocar and aspirator. Nothing came out. On May 13 the urine, acid, had a specific gravity of 1,012; faint cloud of albumen; slight deposit of pus on standing. May 18: Under chloroform, the most prominent part of the tumour was tapped with the aspirator trocar,

and three or four ounces of extremely thick viscid purulent fluid drawn off, somewhat like putty. No pain or tenderness followed the operation, and she was discharged on June 27.

I have no idea what is the cause in this young woman of the obstruction of the ureter. Her disease consists in dilatation of the pelvis of the kidney, of its tributaries, and of the kidney itself, by pus. The nature of the pus extracted and the general condition of the patient, suggest that the disease is at present obsolete, if not retrograde. That is a very important point, indicating the advice we gave. Cases of this kind are very serious, being very dangerous; and I have little doubt that sooner or later this young woman will have to call again for advice, for the disease she has is generally fatal. It is treated by one or other of three proceedings. One is to let it alone—which is a very painful resolution for all parties; the practitioner standing aside in impotence for substantial relief. Another proceeding is to open the tumour and let the contents run out; and this is done in a variety of ways. The proceeding which we contemplated in this case was of a different kind—the excision of the kidney bodily; but we not only did not press this operation on the woman, we recommended her to go away without it. The operation is dangerous, and the case at the time was not urgent. As I have said, however, the case will some time or other in this woman's life prove urgent if it behaves as other cases of the kind do, and the question of operative interference will come again to be considered.

Before passing on, I may mention a case lately in "Martha"—a woman pregnant about five months, and having pain in the right side, and a large dense swelling indistinctly felt there. Lying in bed made her comfortable, and she left the hospital. In a few days she died, almost suddenly. Post-mortem it was found that a pyonephrosis

had given way, a very small aperture transmitting the dirty pus into the peritoneal cavity.

That is all I have to say about the pyonephrosis, but the case of A. S. introduces us to very important practical questions. You will observe that this patient came into "Martha" complaining of irritable bladder. It was for her a secondary matter that she had a lump in the side which ached: it was for irritable bladder that she had been in the hospital twice previously, and now for the third time—for the first time under my care. Having resolved not to interfere with her kidney, it was our duty to consider what we could do for her main suffering—her irritable bladder. In order to decide what was to be done for her irritable bladder, we had before us one of the most difficult questions in practice—Where is the disease? This irritable bladder, was it the consequence of the pyonephrosis?—was it the consequence of the condition of the orifice of the urethra that I have already described?—was it the result of disease of the bladder itself? Upon the decision depends the line of treatment. In this case we excluded disease of the bladder by examining it, and finding (as you observe is recorded in the history of the case) that the bladder was natural, capacious, not tender, and elastic. A woman suffering from a slight degree of cystitis would have her bladder somewhat contracted, exquisitely tender to the touch of the sound, and hard or inelastic. We had no hesitation in concluding that it was not the bladder that was in fault. We had next to consider whether it was the kidney or not. That the kidney was the cause of the irritable bladder in this case was rendered very improbable by the fact that the irritable bladder had existed before the disease of the kidney existed, and had not been aggravated by the increase of the disease in the kidney. Lastly, we had no hesitation in concluding that the irritable bladder was the result of the disease of the external genital organs, affecting in her at one time the

urethra, at another the urethra and parts external to the hymen; and, when she came to us, affecting the urethra in the peculiar way I have mentioned. Were this woman married she would infallibly suffer from dyspareunia, producing vaginismus. The peculiar disease, of which this is an excellent example, is like lupus in its history, recurring after it is healed or extirpated. Here we have it, not producing dyspareunia and vaginismus, because the woman is not married, but producing irritability of the bladder, one of its most common consequences.

Notice the interesting circumstance that the disease at first presented itself as a caruncle of the urethra. The nature of that caruncle, or the fact that it was not a common caruncle at all, but a slight kind of lupus, is shown by the history of it: the presence now of little ulcers about the urethra, the absence of caruncular swelling, the presence of little ulcers around the hymen; contrasted with a mere caruncular hypertrophic swelling when she first came to the hospital.

We settle the question as to the cause of the irritable bladder by a study of the time and the order of appearance of the various phenomena which we use to help us in forming a judgment, by the characters of the phenomena, and by their severity. Using these methods of judgment will not enable you to solve the question in many cases. In this case it does enable us to solve the question. Long essays have been written by eminent men—especially by surgeons studying diseases of the bladder in the male—upon this very point whether this irritable bladder arises from disease of the bladder, or of the urethra, or of the kidney; and, having read them, I must tell you I consider that nothing could be more unsatisfactory. We get further in the case of women than it is possible to do in the case of men in settling this very important practical question; and you will observe upon this settlement depends the

direction of your treatment. Your treatment will be in wrong lines unless you form a good judgment on this point. Now, here is a case of this disease not producing dyspareunia and vaginismus, but producing irritable bladder. In the lower animals irritation of the orifice of the urethra produces contraction of the bladder. Here is an example; and no doubt can remain upon the subject, for when this woman was cured of the irritation of the orifice of the urethra she was cured of irritability of the bladder; and when the disease causing the irritation of the orifice of the urethra came back, the irritability of bladder came back.

To conclude this case, I must tell you that we did nothing by operation. The patient had been thoroughly, even heroically, treated twice; yet the disease came back, and we did not feel disposed to begin again. If she returns we may reconsider that, and give her another chance of getting rid of these irritable ulcers, this lupoid disease about her vulva.

Lastly, I come to a case of Stricture of the Urethra; and I am fortunate in having it to relate, because, if I were to make a case to illustrate what I have been saying, I could not get a better one. A woman came to us suffering from irritable bladder. She had to make her water frequently, sometimes every few minutes. It was not a case of hours, but of minutes, and she could not get good sleep. On examining this woman we found that there was no orifice of the urethra in the natural situation. She had no history of syphilis, of lupus, of operation, or of injury; yet there was no orifice in the situation of the urethra. A little to the right side of the natural position of this orifice was a very slight redness. A little surgical probe pressed against this redness entered the bladder. The orifice of the urethra, then, was strictured. On examining the woman's bladder we found it not expanded unnaturally. It was a large bladder, but not larger than you frequently see in healthy

women; but we found the urethra expanded. The bladder-cavity did not begin at the internal orifice of the urethra. There was no urethral canal. The bladder was not inflamed in any degreee; it was soft, not tender, and large, though not unnaturally large. Now, here is a very plain case. A little operation was performed with a bistoury, enlarging the external orifice of the urethra, so that bougies, number 15, 16, and then 18, were passed into the bladder. Within two days the canal of the urethra had re-formed itself; and from the moment of the operation the woman was cured. She slept that night, she had no irritability of the bladder at all, and made no complaint. She remains cured. Much might be said upon this case, as illustrating very important subjects both in uterine and in vesical pathology. To-day I have only time to show you how important it is as indicating that disease at the orifice of the urethra may produce irritable bladder. It confirms in a very remarkable manner—as remarkable as if we had made an experiment for the purpose—the statement I have made, that an irritable bladder may be due to a disease affecting the external orifice of the urethra or its neighbourhood.

LECTURE XXV.

ON IRRITABLE BLADDER.

The subject of this lecture is Irritable Bladder. Upon this subject, in a former lecture—that upon Aching Kidney—I made some remarks which I shall not repeat now. They related to important parts of the matter, and referred chiefly to the importance, in the diagnosis of cases of merely irritable bladder, of taking notice of the order in time of the appearance of the phenomena of the disease, and of the severity of the different symptoms.

"Irritable bladder" is rather an ill-chosen name, because every bladder is irritable; every bladder has a peculiar faculty of sympathizing with diseases in neighbouring organs, and indeed in some remote organs; the influence of sympathy is observed even in the case of emotions. But every bladder is not in the state of disease called irritable bladder—a condition in which the bladder is not only irritable but irritated, and that generally not by disease referable to itself. An irritated bladder may be so merely by sympathy, or reflex influence; and I shall give you cases where there is no other possible explanation of the irritation of the bladder than that founded on sympathy, or reflex influence. But some irritated bladders exhibit a certain amount of catarrh, that is, of superficial inflammation; and this catarrh may be truly called a secondary disease, not a disease of the bladder primarily—a disease, therefore, to be studied in connection with the cases of merely irritated

bladder to which I am chiefly directing your attention. You know well that inflammation may be excited by sympathy. That is well illustrated in some cases of inflammation of the eyes, disease in one eye inducing disease in the other; and that kind of induced disease has much the same history, much the same characters altogether, as those of the simply irritated bladder that I am going to describe.

Some cases of irritated bladder are no doubt explained by the irritation being conveyed, not through contiguity, not through any nervous connection, but through the passage of morbid products from one organ to another. For instance, there is no doubt that in children irritation of the bladder is frequently a sign of gravel. That is a well-known cause of violent pain in children, accompanied by intense irritation of the bladder, and it is frequently explained by the passage of the cayenne-pepper-like grains of uric acid through the bladder and the urethra. In adults the same irritating character is sometimes ascribed to other kinds of gravelly urine or phosphatic urine. But I am inclined to think that urine not decomposing, yet containing ordinary morbid elements in solution, will not irritate the bladder. It is, in general, only when you have the urine decomposed, or carrying with it solid matters, that you have a bladder thus irritated.

The importance of this subject has been fully recognized, No diseases are more urgent than diseases of the bladder, on account of the great suffering and inconvenience which they cause. If you do not diagnose properly a disease of the bladder; if you mistake a merely irritated bladder for a more real disease of the bladder, your whole treatment will be misdirected, and you will be, so far as your ignorance is blameable, a bad adviser to your patient.

A bladder may be sympathetically irritated by diseases of the kidneys, of the ureters, of the urethra, of the external organs of generation, of the pelvic organs; and it is impossible

to exclude some conditions of the bladder itself as a source of mere irritation.

Now, what are the indications of mere irritation of the bladder? To the patient the great indication is the frequency of urination. This is often accompanied by pain in urination, or strangury. But frequency of urination is not of itself a proof that a woman has irritable bladder. For example, an hysterical woman, when she is under the influence of that condition, urinates frequently because her bladder is frequently and rapidly filled. And it is not an uncommon thing for diabetes to be mistaken, for a time at least, for irritable bladder. I have seen this repeatedly happen in consequence of insufficient attention to the circumstance that frequent urination is not of itself a sign that a woman has an irritable bladder. You must take into account the quantity of urine; and in the case of hysterical and diabetic women, if the quantity were taken into account, the error would quickly disappear, the explanation of the supposed irritability being at once given. On the other hand—and this is a still more important remark—the passage, frequently, of a small quantity of urine is not of itself a proof that a woman has a merely irritated bladder; especially it is not a proof that she has a bladder which resents moderate repletion. When a woman passes a small quantity of water frequently, regularly, you may be pretty sure either that her bladder is small and contracted, or that she has an irritated bladder—that is, one which resents too soon an ordinary amount of repletion. But you have no proof, in the fact that a woman frequently passes a small or even a large quantity of urine, that her bladder is not enormously capacious. Some of the commonest errors in obstetrics arise from neglecting this. For instance, a woman with retroversion of the gravid uterus not rarely complains of irritable bladder, that is, of frequency of urination and painful urination, and yet her bladder may all the time

contain a very large quantity of water, only a part of which does she pass. The same thing is true of other conditions of the bladder, apart entirely from pregnancy—conditions of irritated bladder from permanent over-distension or too great size.

In a case of simply irritated bladder, of the kind easiest understood, you have healthy urine. But studying a case of irritable bladder, you are frequently called upon to pay attention to the condition of the urine, to its contents, such as mucus. Urine containing a large quantity of mucus is, at least at first sight, supposed to be urine from a bladder which is not only irritated, but in a state of catarrh; and this suspicion is increased by the circumstance, if it is present, of the mucus being flaky or mixed with pus. Still further is the fear increased if the urine contains blood; and still further if the urine is alkaline. Now, all these circumstances—a large amount of mucus, some pus, some blood, and an alkaline condition of the urine—lead you to suspect or believe that the bladder is not merely irritated, but also diseased, and that not secondarily merely. You have to consider whether the bladder may not be sympathetically inflamed in a slight degree; and, secondly, whether these products discovered in the urine may not be derived from other sources than the bladder. Mucus is seldom derived in large quantities from the ureters and pelves of the kidneys, so that a large quantity of it is more distinctive; but it is impossible to say where the limit lies between the amount of mucus that may be secreted from the pelves and ureters of the kidneys, and that which is distinctive of vesical catarrh. Lastly, in order to complete a diagnosis of a case of irritated bladder, you examine the bladder itself. I think this is the most important part of the means to be employed, and I shall make special reference to it at the close of the lecture.

The urine may contain fat and hairs from a dermoid cyst,

and I have seen such a case treated long as if it were one of simple curable irritable bladder.

I propose now to give you some examples of this disease, most of which have occurred in "Martha" ward during the last few weeks. I begin with a case which is extremely clear. A young woman, a long time under treatment elsewhere for menstrual disorder, consulted me, and the only thing I could find wrong about her was an aching left kidney. She had no doubt had menstrual disorder, but I could find by physical examination nothing to account for it. When I saw her first, her urine was quite healthy. Some months afterwards she returned to me, and then her complaint was of irritated bladder, and she gave the best description of her symptoms by saying that she had to get up several times during the night in order to make water. The examination of her bladder revealed a perfectly healthy condition. The urine was limpid, without deposit, of a natural specific gravity, and looked healthy in every respect. But on more careful examination it was found that her aching left kidney was worse than it had ever been, and that her urine contained albumen in considerable quantity. Here, then, you have a case about which there could be no hesitation. There was nothing in it to account for the most prominent symptom, the chief complaint of the patient, but the condition of the kidney. In my lecture on Aching Kidney I gave you another example of the same kind.

I now come to a case of greater difficulty. E. M., aged thirty-two, not married; was admitted into "Martha" ward on account of supposed disease of the bladder. Urine acid, 1,012, containing a small quantity of mucus and still less of pus. Complains of having to pass water every half-hour, and the process is accompanied by pain, which she feels greatly in the private parts; she also complains of pain in the loins, and down the inside of the thighs. She was ordered a saline laxative, to keep her bed, and to have three times daily an ounce of decoction of Pareira, half a drachm

of tincture of Hyoscyamus, and twenty minims of sweet spirits of Nitre. Under this treatment her symptoms were in a few days greatly diminished without any improvement of the urine—indeed, close observation discovered it frequently tinged with blood, and always containing albumen, pus, and mucus. The bladder was now examined physically, and no disease whatever was detected in it. The patient's chief or only sufferings latterly were from pain in the region of the kidneys. A consultation with Dr. Gee resulted in the opinion that the disease was not in the bladder, but in the kidneys or their pelves. Of the truth of this result I can have no doubt. You see that the treatment removed the woman's bladder symptoms, but left her renal symptoms. The quantity of mucus and pus was small—not what you would expect in a case of disease of the bladder; and the end of the case, after successful treatment of the vesical symptoms, being persistence of the renal symptoms, we had no doubt that we had an example of a bladder irritated by sympathy with disease of both kidneys or of their pelves.

I now come to examples traceable to the external organs, and I recall to your minds the case of stricture at the external orifice of the urethra, where the complaint was frequency of urination, where there was no disease in the bladder discoverable on physical examination, and where on removal of the stricture of the orifice of the urethra, a cure was instantaneously effected. I will give you another example where the disease arose from caruncle of the urethra—caruncle of an irritable kind.

S. S., aged fifty; has been married thirty years. Catamenia ceased a year ago after previous regularity. Complains of forcing pain in private parts, and of frequent micturition when she is not in bed. Urine acid, specific gravity 1,020, no albumen, some phosphates. Attached to the posterior lip of the urethral orifice by a large pedicle is a small red caruncle of the size of half of a small split-pea. It is extremely tender. It was removed, under chloroform, by scissors. Next day

hæmorrhage to the extent of some ounces was checked by ligature of a small vessel in the wound. She remained in "Martha" twelve days after the operation, and had no complaint whatever after the caruncle was removed.

This, again, is an example, as clear as possible, of irritated bladder cured by the removal of its cause, the cause not residing in the bladder, but in the external parts. In a former lecture I recorded a case where we had slight difficulty in diagnosing a case of irritated bladder while the woman had pyonephrosis, which of itself was enough to account for it; but she also had disease at the orifice of the urethra. Now, in that case you will remember we made out that it was the disease at the orifice of the urethra that was the cause of the woman's great and chief sufferings—namely, from irritability of bladder. When the disease of the urethra was removed, she had no irritation of bladder, although the pyonephrosis existed. When the disease of the urethra returned, she was unaware of its return, but her irritability of bladder returned, and that was her great complaint.

I might give you more examples of disease of the external genital organs causing irritated bladder; but I go on to say a few words as to the most difficult part of the subject. I refer to cases where the cause of the irritability of the bladder is in the pelvic cavity or in the bladder itself. It is well known that the bladder sympathizes with all sorts of diseases in the pelvis, and its sympathy is evidenced by irritation. In the case of inflammatory diseases, and in the case of some non-inflammatory diseases, we refer the irritation to congestion of the bladder, or inflammation in a slight degree communicated to it from neighbouring inflammations. It is a very frequent thing to read of irritation of the bladder in these circumstances accounted for by pressure or by distortion—that is, change of shape and position. In regard to this, which is a very important

matter in connection with the study of flexions or other minor displacements of the uterus, my mind is not quite made up, but I am strongly of opinion that no change of position, no distortion, no pressure of an ordinary kind, causes irritation of the bladder. You will find the bladder without a trace of irritation, yet having every possible shape and every kind of displacement; and I see no sufficient reason for referring (as is often done) irritation of the bladder to its change of shape, or pressure upon it, or displacement of it.

Cases where the bladder sympathizes with disease in its neighbourhood are well known to all; but there is a class of cases where the irritation seems to be in the organ itself These cases are characterized by the too great size of the organ. This can sometimes be traced to a distinct cause. Sometimes it is not to be accounted for. In cases of this kind the patient occasionally has, in addition to irritation of the bladder, incontinence of urine—that is to say, the incontinence comes on at times, and irritation at other times. When these cases are watched it is frequently observed that the woman can retain her water for a very long time, and sometimes it is found that there is air in the bladder. This air gets admission sometimes through the catheter, but I have seen it in such cases present where this explanation was not tenable, the air having got in through the urethra directly. When air gets into the bladder you can easily understand that you are very liable to have the urine decomposing, especially as it may be long retained; and this aggravates the case very much. The simplest case of this kind that I remember to mention is one of a young woman who was brought to me several years ago, in whom the obstacle to marriage was that she was in the habit of wetting her bed at night, and that during the day she had frequently to make water. The disease was distinctly traceable to her mother's bad habit of punishing the girl when she was a

child, for wetting her bed, and to over-distension of the bladder beginning then. The bladder was enormous. A vesical sound could be passed into it—I forget the number of inches—but it could be felt at the umbilicus. There was no other disease present. The urine was healthy, and the case was cured by keeping the bladder empty. In order to keep it empty the bladder required more than to be evacuated by passing a catheter. A bladder may remain well filled while the urine has free exit through a catheter. In such a case, in order to insure that the evacuation is complete, you have to squeeze it out through the catheter; as the sportsman does with rabbits he has shot.

That is a simple case, and I have seen more than one of that kind, such as one that came under our notice in "Martha" not many days ago. She was an out-patient, so that I cannot tell what effect upon her the treatment by regularly emptying the bladder has had. Her case was evidently one of this kind. I will read part of it as given in the letter which was sent along with her:—"Many years ago she was a patient of Dr. T., when she had uterine displacement with bladder symptoms. Five years ago she had an accident, and since that time the bladder symptoms have been worse. She complains of pain in the region of the bladder. At one time she cannot hold the urine, at another she cannot pass it, and at another she has to pass it very frequently. There is nothing abnormal in the urine, but occasionally it is alkaline." This woman was found to have a bladder of greatly exaggerated capacity, but otherwise healthy.

In these cases the bladder is sometimes not only large in capacity, but hypertrophied. Many are of extreme difficulty; and I pass on to another important point.

Irritation sometimes does not occur when you would most expect it, when even the bladder itself is diseased. Of this I shall give you several examples. You remember a case of pyonephrosis to which I have already referred. That pyo-

nephrosis did not bring on irritability in the woman's bladder. In a case lately in "Martha," a urethral cyst did not bring on irritable bladder, but the treatment for the urethral cyst brought it on severely for a time.

Mrs. A. D., aged thirty-one, two years married; no children; came into the hospital complaining of dysmenorrhœa, which has been gradually getting worse since marriage. She has a retroverted, bulky uterus, and a tender, inflamed left ovary. A tumour of the size of a boy's marble lies in the vagina, connected with the middle of the urethra by a large pedicle. It is cystic. There is no complaint of irritated bladder, nor is there frequent micturition. The cyst was opened by bistoury and evacuated of its viscid, glairy contents. Next day she complained of difficulty of micturition. Four days afterwards the cyst was reclosed. It was re-opened freely and cauterized with nitrate of silver. This increased greatly the irritability of the bladder for a time, but it soon disappeared; and when she was discharged she had no complaint of her bladder.

I may mention a still more extraordinary case illustrating the absence of irritability. A woman died, under my care from perimetric abscess and tubercular peritonitis. The perimetric abscess was a consequence of parturition, and it burst into the ileum. Pus was never observed in the stools. Simultaneously with the diminution of the abscess the urine became bloody, and carried with it a large amount of pus. I never doubted that the abscess had burst through the bladder. A post-mortem examination was made, and there was found no communication between the bladder and the abscess. The bladder was only slightly contracted, and the whole of its mucous membrane was dark red, in a state of the highest degree of catarrhal inflammation, secreting pus and also exuding blood. The woman had no irritability of bladder; she never complained of that organ.

Another case is that of a patient under my care, in hospital, with great hæmaturia. The case was diagnosed as being not one of disease of the bladder on account of the physical examination revealing a healthy condition, so far as it could be made out. This woman died suddenly, and her bladder was found to be everywhere dark red; and on its internal surface there were several nodules of soft cancer.

We have recently had a most remarkable case of absence of irritability in a woman who had retroversion of the gravid uterus. Its replacement had been too long delayed. There was polyuria in a high degree, the urine being discoloured brown with blood, and there was much gelatinous mucus and copious pus; yet the woman had no elevation of temperature, no acceleration of pulse, no irritability of bladder, indeed no complaint.

These cases show you the extreme difficulty of this subject, but they are so rare that they do not greatly diminish the confidence that you can place in the means of diagnosis that I have been describing. Before I pass on I shall tell you another curious condition in which a bladder ceases to be irritable. You know that, in cases of ulceration of the bladder, suffering is sometimes so intense that life is scarcely worth maintaining. I do not know any more dreadful picture of incessant agony than that of a woman suffering from chronic ulceration of the bladder of the kind that I am referring to. I remember well a case of this kind, in which the woman herself prevented me from opening her bladder to see if making a vesico-vaginal fistula would relieve her dreadful sufferings. I was not sure that it would have relieved her, but I hoped that it might. Years afterwards the woman got married. After her marriage a great ulcer broke out in her leg, and she went to the surgical part of the hospital and had her leg cut off. When she left the hospital she came to me to tell me that she had no trouble with her bladder now. Nothing could have astonished

me more than this announcement. She told me also of her marriage. I asked her how she made water. She said she never made water. She had no vesico-vaginal fistula; her bladder was a mere slight dilatation of the urinary passage, through which the urine flowed without being arrested in it. She never made water; she had stillicidium urinæ from the urethra; her bladder was a non-existent organ for her—it was extremely small. In that case the examination of the bladder was necessary in order to diagnose the diseased state.

I come now, lastly, to describe what I consider by far the most important point in the diagnosis of merely irritated bladder—viz., the physical examination of the bladder, to ascertain its healthy condition or the reverse. This is done by the use of a sound. I here show you a common vesical sound which I use for the purpose. By this instrument you ascertain the size of the bladder, its hardness and its tenderness. I shall take the last condition first. In a healthy bladder there is no tenderness. You examine carefully, without rudeness, a healthy bladder; the woman is not aware of your doing so. Between this and the intensest agony you have all variations of painfulness. I know nothing more severe than the pain of examination of the bladder when it is even slighty inflamed. As a first result of your examination, you ascertain the degree of tenderness, or its entire absence, by the sound.

The next thing you do is to ascertain its softness or hardness. A healthy bladder has a considerable elasticity, so that when you touch the fundus you can push the instrument one inch, at least, farther into the bladder, and it is pushed back again by the elasticity of the organ. When a bladder is irritated it may retain this condition—it generally retains it when it is merely irritated; but when it is inflamed in the slightest degree it soon becomes hard, and it resists the push of the sound. In some rare nervous

women examination leads to complete temporary contraction of the bladder into an egg-like tumour, so as to be completely closed, resisting in this way the introduction of the instrument. This is found as a persisting condition in cases of the greatest inflammation, as in the acute stage of gonorrhœal cystitis.

Lastly, you ascertain the size of the bladder. In order to do this you need not attach any importance to whether the patient has made water recently or not. The bladder does not contract to empty itself. The main use of the contractions of the bladder is to announce that it is time to empty it, to call the woman to the bedside. If then you pass a sound into a healthy bladder to measure it, you must measure from the external orifice of the urethra, because you do not know exactly where the internal one is; and in a healthy woman the sound is easily passed about five inches. In a case of chronic cystitis a very common measurement is four inches. In a case of acute gonorrhœal cystitis, with strangury, you very likely cannot get the instrument into the bladder at all, or, if you do, you will only have a measurement of two or two and a half inches.

To conclude, you can easily see that if a case comes before you as cystitis, and you find that the bladder is healthy, that it is large enough—not too large,—that it is not tender, and that it is elastic, you have in these circumstances almost certain evidence that the woman's bladder is healthy, and that her great symptom, which may naturally give the nosological name to the disease, irritable bladder, is a mere symptom, and not the essence of the disease.

LECTURE XXVI.

ON HEPATIC DISEASE IN GYNÆCOLOGY AND OBSTETRICS.

A VERY striking case, recently in Dr. Southey's ward, "Faith," attracts me to this subject for lecture. In gynæcology, and, indeed, in all departments of medicine, you will find a great deal of vague talk about the influence of the liver in producing or aggravating disease. This talk increases with the imperfection of the works in which it occurs. If you look to the best books on gynæcology and on diseases of the liver, you will see the least of this kind of remark; and it belongs rather to medical lore than to medical science. The best authors are content to leave it more to tradition than to solemn description in books. I am not disposed at all to deride this kind of medical lore, neither am I disposed to take up your time with it on the present occasion, because I have much more definite information to give you upon a very important subject.

In women the only speciality I have to call attention to, with regard to the anatomical condition of the liver, is that it is lower down: in consequence of the peculiar shape of the chest, the liver lies lower in the right hypochondriac region, or at least produces dulness lower down, than in man. In examining the liver in women you have to take special care not to be misled by the results of tight-lacing; the displacement of the liver—indeed the deformity of the liver—sometimes produced by this is so great as to be very misleading were you not aware of its occurrence.

Amenorrhœa has been described as being produced by fatty liver. I can neither confirm nor dispute this, which, so far as I know, is a mere assertion; but I must add that I do not believe it. Fatty liver very frequently occurs in phthisical women, and in such you know that, for other reasons, amenorrhœa is common. That is a very different thing from saying that amenorrhœa is the consequence of this special lesion, fatty liver. Hyperæmia, or congestion of the liver, is said to be produced by suppression of the menses and by the menopause. I am not aware of anything that confirms this statement. Portal obstruction, however, such as occurs in cirrhosis of the liver, might naturally be expected to produce congestion of the womb, as well as of the other pelvic organs, and menorrhagia; and of this I have seen undoubted examples. One occurred not very long ago in "Martha." The woman was thirty-one years of age; she had borne eight children, and had had three miscarriages, the last of which occurred a year before her admission into "Martha." Since that last miscarriage she became very ill with chronic hepatitis. Of the chronic hepatitis she was quite unaware, but, simultaneously with the occurrence of the chronic hepatitis, her menses became more profuse and long-continued; and it was on account of this condition that she came to "Martha." We examined carefully the pelvic organs, and could find there no disease to account for the menorrhagia; and, being satisfied that her chief disease was chronic hepatitis, and that the chronic hepatitis was the cause of the menorrhagia, we had her transferred to Dr. Church's care. There I believe she soon died of the disease of the liver. Menorrhagia here was a distinct result of the hepatic affection.

I now come to consider the influence of hepatic disease in pregnancy. Here you will find remarks very common about the pressure of the gravid uterus upon the liver, disordering its functions and leading to disease of the organ. Even in

good authors, statements like these occur. Similar statements you are probably familiar with in connection with the uræmia of pregnancy and parturition. I ask you, in the meantime, not to believe any such statements, either with regard to the liver or with regard to the kidney: and I cannot omit here making a remark which is of importance in medical philosophy. You would scarcely believe,—yet it is quite true,—that men state, as if it were a fact, that there is great pressure upon the liver and upon the kidney in pregnancy, and proceed to reason upon this, not only to found theories of disease upon it, but also plans of treatment, and all the time they have never given even the slightest good reason for believing that there is any increase of pressure. Surely, the first thing in such circumstances is to demonstrate the increase of pressure; but not one of the authors I have alluded to ever seems to dream that that is the first thing. You must first prove that there is pressure before you proceed to build upon it as the cause of disease and as the basis of a line of treatment. There is no evidence, but rather to the contrary, that there is any increase of pressure upon the liver or kidney in pregnancy. Again, if you turn to the clinical view of the matter, and regard cases of large fibrous tumours and of large ovarian dropsies, you will see nothing to confirm the belief that pressure has anything to do with producing disease of the liver or of the kidneys; for, in those cases, you might expect far greater pressure than in pregnancy, in consequence of the frequently far greater size of the tumours. In pregnancy, however, diseased liver is a matter of immense importance. The liver has been, at least once, observed to be folded upwards upon itself in a case of tight-lace liver, the pushing up of the uterus producing this displacement, and fatal jaundice in consequence. Rupture of the gall-bladder has been observed in labour. After delivery, hæmorrhagic softening of the liver has been observed, and a case has recently been put on record

where, in connection with such softening, the organ burst or was ruptured, and fatal consequences ensued.

But now I come to the chief topic of the lecture, and I will begin with offering some observations with regard to one of the most important diseases of pregnancy, namely, persistent and uncontrollable vomiting. Of the vomiting of pregnancy there are at least two kinds. There is what may be called the common kind, which is almost certainly the result of morbid innervation. Whether the sickness and vomiting of pregnancy is a reflected sensation, or a reflected motion, or the result of a reflected secretion, it is a consequence of morbid innervation. It is frequently very grievous, and perhaps is sometimes even fatal. This kind of vomiting in pregnancy is arrested when the fœtus dies. It is arrested certainly by abortion, miscarriage, or delivery at full time. It is not accompanied by any symptoms of grave disorder, except such as arise from deficient nutrition. But there is another kind of vomiting in pregnancy, our knowledge of which is extremely imperfect, and upon which some remarks are called for. These are cases of vomiting in pregnancy, described by many authors, which prove fatal, sometimes suddenly and unexpectedly, without any apparent cause, or without any suspicion of the cause at the time the histories of such grave cases were written. Along with such cases have to be included some similar cases of sudden and unexpected death after delivery, or after miscarriage.

Our knowledge of the physiology of parenchymatous degeneration of the great glands seems to throw light upon this fatal or extremely dangerous form of vomiting in pregnancy—to show that the vomiting in such cases is something more than a morbid innervation, that it is a symptom of a disease. The case I am about to read to you I am quite sure, some years ago, I should have regarded as one of vomiting in pregnancy proving fatal. I should not have known how to go any farther. But you will find, as I pro-

ceed, that I have dealt with that case in an entirely different manner, deriving my knowledge from recent researches into the nature of a disease called icterus gravis, or what used to be called yellow atrophy of the liver.

It has recently been discovered by eminent physiologists, that, in healthy pregnancy, the earliest stage of this disease occurs; that is, that the great glands of the body (especially the liver) undergo in healthy pregnancy and in healthy suckling a certain degree of parenchymatous degeneration. This is the first stage of the grave disease which I have named. Like the watery blood of pregnant women, this parenchymatous degeneration is not called a disease, because it is the normal condition. If it were found in a woman not pregnant or suckling, it might then be called a disease; but as it is believed to be the regular normal condition in pregnancy and suckling, we do not call it a disease. No doubt this parenchymatous degeneration is, so far as our short-sightedness guides us, an extremely unfortunate thing for women, leading them, as it were, upon the ice, and making them liable to dangerous diseases. The condition of the blood is probably a chief part of the cause of the proneness of women to disease of the kidney and uræmia; the condition of the glands probably being the cause of their proneness to further dangerous stages of parenchymatous degeneration, chiefly of the liver, but also of the kidneys and other organs. Now, if you look into the histories of fatal cases of vomiting in pregnancy, and fatal cases of a similar kind occurring just after pregnancy, in the puerperal state, you will find slight jaundice often mentioned; you will find that, in many of them, hæmorrhages—not uterine alone—are mentioned as occurring; and a condition of lethargy, almost of coma, is described; and these statements seem to me to make it almost certain that the conditions causing death were the result of the aggravation of this physiological condition of granular degeneration that I have been referring to. In order that

you may further see how difficult it has been to reach the truth in this matter, I must tell you that cases of this disease occur, and may prove fatal, without jaundice, or with very little, and without hæmorrhage and without convulsions—that is, without any of the ordinary grave symptoms of the fully developed disease. I am presently to describe a case. This concludes what I have to say about the dangerous and fatal cases of vomiting in pregnancy, and about the dangerous and fatal cases of a similar kind occurring in the puerperal state.

Vomiting is not always present, nor even sickness, though both are generally well marked. Sometimes there is amaurosis, and this is certainly in some cases functional, no disease of the retina being discoverable, and sight quickly returning. In all cases there is collapse and sometimes a fatal result, so rapid as to suggest poisoning as the cause.

I can remember four cases of jaundice and slight albuminuria coming on shortly after delivery. One of them also presented hæmatemesis. They had no accompanying fever. The occurrence of such a combination of conditions has always been very alarming; but great prostration and the present danger of death have occurred in only two of the cases. That which had hæmatemesis presented no constitutional disturbance, except slowness of pulse and a temperature less than normal. I have seen two cases of fatal hæmatemesis in pregnancy, and in them I could only guess some antecedent liver disease.

But before I come to the special case of to-day's lecture, I must say a few words upon jaundice occurring in pregnancy. Ordinary jaundice rarely occurs in pregnancy—jaundice from obstruction, or from catarrh of the stomach and duodenum. I have seen pregnancy in a woman who had a chronic jaundice, and I have seen jaundice come on during pregnancy. In regard to this kind of jaundice there is very little to be said. You cannot mistake this disease. The name of the disease implies all that is necessary for its

diagnosis. Anybody can tell when a woman is jaundiced. It is not a mere tinting, but it is, as the disease you are all familiar with, quite easily recognized. This disease occurring in a pregnant woman does not make her very ill—at least, not more than it would if she were not pregnant; but the woman having it runs considerable risk of abortion or miscarriage. And, when this occurs, the abortion may be directly the result of the jaundice, the child being born alive, and, if the disease has not lasted long, untinted by the jaundice; or the jaundice may kill the fœtus, and the abortion or miscarriage in that case may be a secondary result of the jaundice—the result of the death of the fœtus, not of the jaundice directly—and then the fœtus and all the membranes are deeply tinted with the colouring matter of the bile. Now, in a case of this kind you may have to consider the importance of bringing on premature labour; but this should only be done if the disease is intense and long-continued, and if the child is alive. No doubt it is also worthy of your consideration whether you should not induce it in some severe cases, from the fear of the supervention of the icterus gravis as a consequence of the ordinary jaundice. It is impossible to lay down rules with regard to this last point, because cases have not yet sufficiently accumulated to form a basis of experience for such rules. I must therefore leave it in this undecided state.

Icterus gravis, or the yellow atrophy of the liver, is a rare disease, and has only been well recognized within a generation or so; and I have no doubt that our increasing knowledge, of which I have tried to give you a sketch, will lead to its being found to be not so rare a disease as has hitherto been supposed. Especially will this arise from what is now known, that the essence of the disease may be there without the presence of all or even of any of its grand indications during life; and its grand indications are convulsions, jaundice, and hæmorrhage. If uræmia from disease

of the kidney occurs once in about every 500 women that are in advanced pregnancy or parturient, this disease has not been observed oftener than once in 10,000. The disease is called yellow atrophy of the liver. There may be no atrophy of the liver, the disease proving fatal in an early stage, as in the case I shall read to you presently. The disease has been called cholæmic eclampsia, just as the corresponding disease implicating the kidneys is sometimes called uræmic eclampsia, from the frequency of the convulsions. But there may be no convulsions in either disease; and in the case I am to read to you there were no convulsions. Hæmorrhage from the stomach or bowels or womb, or into the tissues, is a very characteristic phenomenon of the disease, and yet there may be none of it. In the case I am to read there were no hæmorrhages. Amaurosis may be present. The disease may be without jaundice; and generally, as in the case before us, the jaundice is slight. Here the jaundice got less as the woman got worse, instead of getting greater. The jaundice is not like that which you know familiarly as the common jaundice; it is a much slighter condition of tinting, and, in the cases of icterus gravis I have seen, never has proceeded to be a deep yellow. The disease should not be called jaundice or icterus at all; it is a disease which affects the whole body, and whose best known manifestations are in the liver. There you have not only the parenchymatous degeneration of the hepatic cells, which I told you was a physiological condition in pregnancy and suckling, but further steps of degeneration, which this is not the place to describe, going on to complete fatty destruction of the hepatic cells. This, indeed, should be called, if we only knew what the poison was, a case of poisoning, perhaps blood-poisoning. One German author ascribes the disease to poison from decomposition of the fœtus, but for this view he advances no argument except the analogy of other poisons. Believing it to be a poison, he merely fixes upon this one,

apparently without any reason. Now, as I go on I shall, I think, satisfy you that it is probable that instead of the dead and macerating fœtus poisoning the mother, it is the mother's condition that poisons the child. A great author has also suggested that the disease is essentially uræmic; and no doubt, the urea in the urine is very much diminished in this disease; but the disease is not at all like the ordinary uræmic eclampsia. Yet, it is true, parenchymatous degeneration of the kidney with slight or copious albuminuria, is found along and corresponding with parenchymatous degeneration of the liver.

The disease is always accompanied by great prostration, failure of the heart, and tendency to sudden, unexpected death. Yet I have known a case rapidly recover after the pulse had been imperceptible, or very nearly so, for a whole day, and death surely anticipated.

Here I would mention to you an interesting set of facts in connection with this subject. If you read over cases of heart disease, especially mitral regurgitation, you will find that in them women are very likely to miscarry, and miscarriage is in them almost certainly a direct result of the disease. If there is a poison in the woman's blood, in this case it is probably a poison from imperfect aëration of the blood, and that induces the miscarriage. This has been almost proved by experiments on the lower animals, showing that the blood of dyspnœa induces emptying of the uterus. You have further evidence in the fact that the children are almost always born fresh, if not alive. The disease has brought on miscarriage: it has not killed the child. The condition of the blood has stimulated the uterus to action directly. In the comparatively common disease of the kidneys observed in pregnant women with albuminuria, you have an intermediate set of results between those of heart disease and those of icterus gravis. In uræmic patients, miscarriage is not very common. There does not seem to be a great ten-

dency to it. There is a tendency to it, but not great; and so far as I can form an impression from extensive experience and reading, the child may be alive. It is also frequently dead, and we know that in this disease the child may be killed by the uræmia. The uræmia that is part of the cause of the woman's disease is also found in the child. When you come to icterus gravis, however, you will find a different set of results. Not only is the child almost always born dead, but it is almost always born decomposed, and there seems to be no tendency to abortion or miscarriage directly. The uterus is not prone to throw off its contents; if it does throw off its contents, it is as a secondary consequence of the death of the child; and the death of the child here has been shown to be the result, or at least to be connected with the presence, of poisoning of its blood by the biliary acids which have been discovered in it. There seems to be in the icterus gravis rather a tendency to avoid miscarriage. The fœtus is in most cases described as being macerated, sometimes putrid; and instead of abortion being induced we have missed abortion. The case I am to narrate to you is a case in which the womb, as it were, refused to throw off its contents, instead of, as in heart disease, being stimulated to throw off its contents. Here there seems to have been the opposite tendency, and the dead and decomposing fœtus remained in it long after it would do so in ordinary circumstances.

Now, I dare say you will be prepared for my telling you that there is little to be said about the treatment of this very important disease. Emetics, purgatives, and diuretics have been tried, besides other medicines. The only thing I can suggest in the way of treatment is that the uterus should be emptied—this is with a view of saving the mother. You may say, "Is there any chance of saving the mother in a disease like this?" The impression abroad in the profession is that this is a necessarily fatal disease; but there are two reasons for hope: the first is, that we know that the phy-

siological condition, the early stage of this disease, does no harm to a woman; the second is, that there is considerable probability that cases are cured by the death and expulsion of the fœtus, whether it happens spontaneously or is brought about artificially; and this appears to have occurred in the case I have to read to you. So far as the history can indicate, we have reason to believe that this woman suffered from the same disease in her first pregnancy that proved fatal in her second; and probably some of the cases of dangerous vomiting that have been cured by abortion have been in the same category. The present case did not occur under my care, but under the care of Dr. Southey, who called me to see it in "Faith," and to him I must express my gratitude for the opportunity of observing and assisting so interesting a patient.

I have seen sudden, unexpected, death, in a primipara—ill only for a few days with vomiting and slight jaundice—where the child and membranes, spontaneously expelled at the seventh month, were slightly bile-tinted, and the child survives. I have seen recovery in a case, ill for many days; and, after induced miscarriage at the third month, almost hopelessly ill, amaurotic, and sometimes pulseless; pulse quick, and no elevation of temperature. And now Dr. Southey's case.

E. C., aged thirty-four; said to be of temperate habits; was married about a year ago. Three months after marriage she had a miscarriage—after, it was supposed, the second month of pregnancy. At this time her condition was described as resembling that at the time of her admission to "Faith," only the jaundice was believed to be greater. Her present illness began about five weeks before admission (December 2), with vomiting and headache, of which the former has continued ever since. She has kept her bed for three or four weeks. The jaundice is said to be deepened in colour. She has had wandering delirium, especially at night. On admission is in a wandering, dreamy, state, and says she

has no pain; is generally, but only slightly jaundiced. Tongue moist, not furred; breath offensive. No itching, nor yellow vision. Pulse 108; respirations 12; temperature 98·6°. Fulness and supra-pubic dulness in the hypogastrium, where there is also slight tenderness. Does not permit a sufficient vaginal examination. Hepatic dulness normal; splenic dulness normal. Urine dark-coloured, bile-tinted; specific gravity 1,012; turbid, acid, albuminous (one-fifth); contains casts, epithelial and blood cells. Takes milk and beef-tea, but vomits almost everything. December 4: To have a borax wash for the mouth; the bowels to be opened by saline draught. 5th: Hiccough occasionally. 6th: A dark, lumpy, motion of bowels. 7th: Headache. 8th: Has slept well, after taking ten grains of chloral. 9th: To be fed per rectum. 10th: Jaundice diminished; says she feels better. Pulse 86; temperature 97·4°. 11th: Urine one pint and a half in twenty-four hours, albumen one-eighth; hiccough. 18th: Pulse 128; respirations 18; temperature 97°. Purple discoloration of inner sides of thighs. 19th: Tongue furred. Is more drowsy and wandering; vomits her food mixed with bile. Only a trace of albumen in the urine, which contains crystals of leucine. Urea about sixteen grammes in twenty-four hours. 21st: The liver dulness slightly diminished; jaundice less; quite rational when refusing to permit a vaginal examination; objects to induction of abortion. 23rd: Tangle-tent introduced into cervix uteri; urine runs away in bed; tent removed after sixteen hours. 24th: Probe passed into the uterus, and a large tangle-tent placed in the cervix, with a sponge in the vagina; ergotine to be injected subcutaneously. Died in the afternoon. Post-mortem, forty-three hours after death: The surface of the uterus, which is of about the size of a cricket-ball, is congested, and so are the neighbouring coils of intestine. The liver small, weighing 2 lbs. 2 ozs., very soft and flabby to the touch; its surface partly green (especially round the edges), partly

brown, with the lobules very distinctly marked; no evidence of congestion. Gall-bladder contains healthy-looking bile. Liver on section yields an emphysematous feeling; colour uniform, greenish-brown at first, but becoming darker; no trace of lobules to be seen; highly emphysematous (not putrid), its section resembling that of highly aërated bread. Spleen very dark in colour and emphysematous. Kidneys flabby, with large air-blebs under the capsule and air-vesicles on section; structure very indistinct, but presents evidence of congestion of cortex and bases of pyramids. The cavity of the uterus contains air and shreds of membrane, and a much decomposed fœtus of about six weeks. (She had been held as being three months pregnant.) Placenta adherent, about two inches in diameter. Contents of bowels stained with bile. Stomach congested and presenting internally numerous air-vesicles. Left common iliac vein contains air with fluid blood.

These are only some of the details of this very important case. The microscopical details I have omitted altogether. It only remains for me now to offer a few remarks about the diagnosis of this disease from uræmia. This disease is, generally, a comparatively chronic one, occurring in pregnancy. Uræmia, or the disease of the kidneys connected with the uræmia, is generally an acute disease, running a rapid course and occurring most frequently during parturition. In this disease you have delirium, muttering, and lethargy rather than coma—conditions which are very different from the silence and deeply comatose condition of a woman suffering from uræmic eclampsia, between the fits. In this woman, and in cases of this kind, jactitation and restlessness are often described. The reverse is the case in the coma of uræmia, and in our patient at the worst there was a possibility of being roused to clear intelligence for a few minutes, which is not observed in uræmia. In this disease you may, as in her case, have almost constant vomiting. Whether it

is accompanied with sickness or not I am unable to say, but there was in this woman, even when she was not vomiting, the constant or very frequent repetition of the efforts of vomiting. This is not observed in uræmia: violent vomiting for a time is not uncommon in uræmic cases, but it is only for a time, at the commencement; constant vomiting is not observed. In this disease there was observed great duskiness of the skin, and a peculiarly injected condition of the venous capillaries in the thighs. Now, in the deep coma of uræmic eclampsia you have simple cyanosis of varying degree, sometimes very intense; but you have not the duskiness and local blueness I have mentioned as occurring in this disease. There are a great many other distinctions between the two diseases, founded upon examination of the discharges from the body, especially upon the examination of the urine, and the two diseases are quite easily distinguished post-mortem. I have made these remarks upon the distinction of the two diseases, because some authors have regarded the eclampsia and coma in both as the same; and, indeed, as I have already told you, at least one great author describes the coma and eclampsia as owning the same cause. The clinical history of the diseases is very distinct, and shows no very close alliance between them at all. I must warn you against supposing that anything I have said in regard to icterus gravis is conclusive. The disease is rare, and has not yet come to that degree of distinctness of recognition that enables a lecturer to speak with precision and dogmatically; but I feel quite sure that the subject is of such intense importance as to be well worthy of the time I have given to it.

LECTURE XXVII.

ON FIBROUS TUMOUR OF THE UTERUS.

The subject of this lecture is furnished by two cases of uterine fibroid which have recently passed through "Martha."

This disease, uterine fibroid, is one which has itself suffered from a very serious affliction, the disease of many names, very important from a student's point of view. The regular name is fibrous tumour of the uterus. The term uterine fibroid has been lately coined; it is shorter, and on this account may supplant the old name.

Uterine fibroid is a disease of the child-bearing period of life, not of any other; a disease affecting the elderly women rather than the younger during this period, and probably attacking women who are fertile rather than those who are sterile. It is a disease which affects the middle layer of the wall of the uterus alone. The chief constituents of the middle layer of the uterine wall are unstriped muscular fibre and connective tissue; and these tumours generally consist of both of these structures in various conditions of development; sometimes, however, of one or of the other almost exclusively. Its vascular structures may be little developed or may be immensely developed. A fibroid may be telangiectatic—that is, the venous sinuses of the tumour may have a peculiarly great development. It may also be lymphangiectatic, which signifies a great and peculiar development of the lymph channels.

This tumour may develop itself wherever there is tissue

of the kind constituting the middle layer of the uterine wall; for instance, in the round ligament, broad ligament, Fallopian tube, vagina, or ovary.

The subject of to-day's lecture is ordinary characteristic uterine fibroid. This may grow in the midst of the tissue composing the middle layer of the wall of the uterus, in which case it is called imbedded, or intra-mural; or it may grow in or on the outside of the middle layer, when it is called superitoneal; on the other hand, it may grow in or on the inside of the middle layer, in which case it is called submucous. This is a very elementary and incomplete statement of the three positions.

The cases upon which I lecture to-day are of the commonest variety—imbedded, or intra-mural. These are almost always more or less distinctly separable from the tissue of the uterus, surrounded by a capsule of tissue less dense than its own or that of the uterine wall, and in this capsule are developed enormous uterine sinuses. It is this great development of uterine sinuses around the tumour which gives it its chief importance. This development is analogous to that which takes place in pregnancy.

Now what is the importance of these tumours? Why is it that they are of such intense interest to practitioners? Because they are very common. Because they are sometimes very large. Because they sometimes give rise to diagnostic confusion and difficulty, especially when they are complicated. When complicated with a cyst or chamber in their substance full of fluid, they are very liable to give rise to error in diagnosis. Such a tumour is call fibro-cystic, and is often difficult to distinguish from ovarian cystoma. When fibrous tumours of the uterus are complicated with pregnancy, the one or the other condition alone may be recognized, in which case an error of omission occurs.

I now come to the great interest of this disease. It is for the most part a bleeding disease, and might be called by the

name of metrorrhagia. This would be giving it a nosological title, such as many diseases still have or retain. It is better, however, to adhere to the more distinctive and more scientific name—uterine fibroid. It is true that there is sometimes no hæmorrhage, or even amenorrhœa; but this is exceptional. The bleeding is frequently of a passive nature, or a more or less copious oozing, resembling that of a menstruation, and the loss of blood may be large, because the area from which the blood flows is often very great compared with the bleeding area in a healthy menstruation. Frequently, however, it is not a passive discharge, but a regular flooding; and in this case a woman bleeds as in phlebotomy, a large sinus being open, and I have seen such openings. This kind of bleeding, I believe, leads to death, directly and indirectly, nearly as frequently as post-partum hæmorrhage causes death directly. Sometimes it causes death directly or at once, but more frequently indirectly, by producing extreme anæmia; the woman dying, perhaps, without any loss of blood at the time. Examples of both of these fatal terminations are not very rare.

These tumours are further important: they frequently interfere with utero-gestation. They are themselves liable to disease; inflammation and sloughing, and probably other forms of degeneration. They are dangerous to life from sometimes producing chronic or acute peritonitis: occasionally appearing to produce what is called cancerous peritonitis, the latter half of this name being suggested by the rapidity of its progress. Very rarely peritonitis and death are induced by peritoneal rupture. I have known peritonitis and death caused by crackings of the outside shell of a fibroid which was calcified *en coque*, and in which the *coque* was made to crack or burst outwards by the shrinking of the internal parts of the tumour.

Sometimes the disease produces an extreme and even dangerous amount of constitutional or gastric irritation, so

called from our present ignorance of its real pathology. Sometimes, but rarely, it causes obstruction of the bowels. We have in our second case for to-day's lecture an example of a rare fatal termination of this disease; in the midst of convulsive and other nervous phenomena induced by uræmia, the consequence of partial and long-continued obstruction of the ureters.

Such, gentlemen, is a rough outline sketch of the pathology and formidable character of the disease of which we have recently had two examples in "Martha." Now for the history of the first case.

J. G., æt. forty-five, married twenty-three years; three children, the last seventeen years ago. Catamenia commenced at fourteen years of age; last occurred a fortnight ago; latterly irregular; interval from four to six weeks; of about four days' duration; on the last occasion the loss excessive. No leucorrhœa. Two years since, first noticed a swelling in the lower abdomen, which has been getting gradually larger. Has no pain when still, but feels discomfort in the lower back when walking about. Is extremely anæmic, with puffy swelling of the face. Belly prominent, with uniform surface, semi-globose; lower half occupied by a firm elastic mass, with an indistinct feeling of fluid: this mass moves freely from side to side; it is not tender; no fluctuation. Mass dull on percussion; resonance commences one inch above the umbilicus. Per vaginam, cervix uteri much elevated; brim of pelvis presents fulness, but is otherwise natural. Cervix healthy, with a minute excrescence seen to project from its interior, not felt by the finger. Probe passes easily to the left, and runs up on the left side of the tumour. Its point can be felt a little above the level of the umbilicus, and about five inches to its left, when it has passed in six and a half inches. Uterine souffle plainly audible in the region of the right iliac fossa.

Here was a very simple case, but I shall show you it

might have been a very difficult one to a beginner. There were three small polypi in the cervix uteri, from which the hæmorrhage might have proceeded, but probably did not do so to any important amount. They were removed by forceps. This tumour might readily have been mistaken for a six months' pregnancy; there was a round swelling, firm and elastic, and on manipulation it could be felt distinctly to contract. On auscultation, the uterine bruit or souffle was heard. Mark how erroneous it is to call this sound the placental bruit, and yet it is a term frequently applied to it. The tumour was movable: the cervix was high, large, and soft. There were, therefore, in it many of the chief features of pregnancy; and the bleeding might have been referred to the mucous polypi. The age of the woman, and other points, however, were sufficient to dismiss such an idea in our immediate case; and so the uterine probe was introduced, which revealed a large uterine cavity (as would also be met with in pregnancy). The treatment of this case was not to produce absorption; such an occurrence is so rare that it must not be expected; it may be hoped for in an old woman. Of course we removed the three small polypi, which had little to do with the hæmorrhage; and hæmorrhage was the only important symptom or condition to combat.

The treatment adopted was a course of ergot. In many cases this drug is of no avail, but in this case it had results so immediate as to cause astonishment. I must remind you that the tumour was so soft as to give the idea of fluid: this is exactly the kind which is known to be most benefitted by ergot. We injected three grains of ergotine underneath the skin; this was repeated several times at intervals of a day; but it had at length to be discontinued because it produced very serious diffuse inflammation of the cellular tissue, narrowly and fortunately without a suppurative termination. This effect we found to be peculiar to the patient, for the same injection caused no inflammation in

several other women, the same solution and syringe being employed. In place of it, a fluid drachm of the liquid extract of ergot was given daily by the mouth. The result of the treatment has, as far as I know, never been surpassed as regards rapidity of diminution of the tumour. The dulness which extended one inch above the umbilicus was in forty-eight hours reduced so as to extend only to the level of three inches below it. Such a remarkable result could only have been produced in a soft tumour.

This improvement was accompanied by arrest of bleeding. After being in the hospital two months, she went out, having lost the puffy anæmic appearance, and having acquired a healthy aspect. The use of the ergot may now be given up, for a time at least. [Seven months afterwards she was heard of, and fully maintained all the improvement.]

A few words about abdominal tumours connected with the uterus, which diminish. You must not suppose that uterine fibroids are the only ones. From them, as the result of their shrinking, blood and œdematous fluid, which is often very abundant, may be expressed by the contractions of the muscular envelope. Indeed, at length, and probably also from the mechanical compression, the very tissue of the tumour may be absorbed. I saw a case in the hospital, the other day, in which there was a tumour in the lower abdomen, with loss of blood, while the patient was taking styptic medicine. I diagnosed a morbid pregnancy. The tumour rapidly diminished, and therefore the diagnosis was thought to have been very far wrong; but suddenly a dried-up placenta and fœtus were expelled. The liquor amnii had become absorbed, and this was the cause of the shrinking in this case. A hæmatocele may also rapidly disappear. You will remember a case lately in "Martha."

I come now to the second case, and with it I shall be brief.

A. S., æt. forty, married eleven years; never pregnant. Catamenia commenced at twenty-one years of age; last menses appeared nine weeks ago, continued for thirteen days very profusely, accompanied by severe pain in the lower back and abdomen. The periods have generally been irregular; formerly the interval extended from two to six months. Two years ago they became regular; a scanty loss every three weeks. Six months later the periods became profuse, with only a fortnight's interval. Latterly there has been again a longer interval—four or five weeks—and the loss has been inconsiderable. Complains now of a stabbing pain in the lower part of the belly, especially in right flank, shooting down the right thigh, coming on every few hours. Loss of appetite; constipated bowels; painful micturition; alleged great flow of urine. Urine examined: almost colourless; reaction acid; no albumen. Sp. gr. 1,003. The abdomen is prominent, semi-globose in shape, occupied by a dense hardness, said to be of twelve months' duration; the most prominent point is midway between umbilicus and symphysis pubis, the belly here measuring thirty-two inches. The whole of the prominent part is very hard and elastic. Hardness dull on percussion, up to one inch above the navel. No impairment of resonance elsewhere. True pelvis nearly altogether occupied by a hardness which can be identified with the abdominal tumour above described. The vagina is natural, and contains a white discharge. Probe passes easily into the uterus to the left, to the extent of six and a half inches. Tenderness on both sides of the uterus, especially on the right.

The chief interest in this case lies in the remarkable way in which the disease produced a fatal result. While in the hospital undergoing treatment she was seized with uncontrollable vomiting, which lasted for about eight days. At the end of this time she began to have frequent and incessant twitchings, and at least twice actual convulsive

fits. She had also what I never saw before—a very remarkable limited herpetic eruption upon the perineum and posterior parts of labia majora; nowhere else. This came on suddenly, and disappeared almost as quickly. I have no doubt this was due to the morbid nerve influence which caused the twitchings and convulsions. We were puzzled beyond measure at this unusual and unexpected group of phenomena. The post-mortem, however, explained it all. Post-mortem, thirty hours after death:—*Abdomen.*—Stomach distended; was not opened, neither were the intestines. No peritonitis. Evidence of old peritonitis, upper surface of the liver and spleen being adherent to diaphragm. Liver: upper surface adherent to diaphragm, and lower surface to upper border of right kidney; on section, healthy; gall-bladder full of light green bile. Spleen: adherent to diaphragm; healthy. Right kidney: small, wasted; capsule comes off with ease, leaving surface smooth, pale, mottled with a few blood-vessels; cortex narrow, white; pyramids pink; ureter much dilated and tortuous, nearly as big as to admit a finger. Left kidney and ureter same as the right. The two weigh 11 oz. No clots in vena cava inf., in right spermatic vein or left spermatic vein. At the junction of the internal iliac with the external of the left side is a large clot of a fibrinous nature, not completely organized, filling up the cavity of the vein. On following the branches of the internal iliac vein, a vein was found coming from the spine, and emptying itself into the internal iliac, completely blocked by a nearly organized clot. Filling up the whole of the upper part of the pelvis is a large fibrous tumour, weighing 4 lb. 10 oz., and pushing the bladder over to the left. There is a large vein on the right side of the tumour, dilated, tortuous, and empty. Tumour hard and pale, no blood-vessels being seen in its substance. Cervix obliterated. The cavity of the uterus is on the left, and is very elongated and dilated, and very pale. Right ovary pale, and displays

a recent ruptured Graafian vesicle. Bladder: mucous surface very pale.

Now, how did this tumour produce the fatal result? It was very hard, and was jammed into the pelvis, and compressed the ureters. The ducts became greatly dilated and tortuous. The kidneys were irritated, and their structure became diseased. The nervous phenomena which preceded death were almost certainly uræmic; death being produced by the compression of the ureters as the first link in the chain of fatal consequences of the tumour. The urine when examined presented, as its only morbid condition, a low specific gravity, and this did not excite suspicion of the disorder that existed. Several times, when she was very ill, we wished to examine it; but, as it was passed in bed, none could be collected for this purpose. As I have said, we never suspected this lesion, and consequently were unlikely to diagnose it. In similar circumstances in future, besides looking narrowly to the urine, I should attach importance to pain in the flanks and down the thighs.

The urgency of this case was quite as much in the pain as in the bleeding; and it appeared to me that the pain might be diminished by relieving the great tension in the neck of the womb. The os was slightly opened, and the cervix very much on the stretch; the tumour growing down into its lip on one side. I incised it, therefore, with a pair of scissors, partly to relieve tension, and hoping to reduce the hæmorrhage, which the dilatation of the neck in such cases certainly sometimes does. We contemplated also possible removal of the tumour by enucleation; but the autopsy showed that such a result could scarcely have been produced. The operation of enucleation would have probably proved a failure, and would probably never have been attempted, from the failure of the indications for its fulfilment which should have been manifested in the progress of the interference.

The destruction of the tumour might have been attempted by other methods, such as by means of applications of the actual cautery. But while the autopsy showed that successful enucleation could scarcely have been effected, it also showed a lesion of the urinary system which rendered removal of the tumour necessary for the saving of the woman's life from the kind of death which carried her off.

Recently, oophorectomy has been resorted to in cases of profusely bleeding uterine fibroids, and the operation is specially applicable when the fibroid is not large, the ovaries being then comparatively easily found, which is often not the case when the fibroid is large. This operation, there is reason in our present limited experience to hope, arrests the bleeding and leads to diminution or absorption of the tumour. It is not yet an established therapeutic procedure. Still less is excision of fibroids in this desirable established position, the operation having, as hitherto practised, too high a mortality for general recommendation. But much may be expected from the zeal and boldness of the surgeons who practice these surgical procedures, and who may so perfect them as to make them safe enough for our adoption.

LECTURE XXVIII.

ON INTRA-UTERINE TUMOURS.

I PROPOSE to-day to say nothing of malignant growths, and I prefer to discuss my present subject under the title of "intra-uterine tumours" rather than "intra-uterine polypi," which latter would be the natural or ordinarily-used designation of the subject of this lecture. In describing polypi and tumours two things are confused—the origin and the situation of the polypus or tumour; and, like all confusions, this one leads to a great deal of harm. A tumour is best named with reference to its origin. To-day we are considering only tumours which are intra-uterine in their origin; which spring from the cavity of the body of the uterus, and which remain there. An intra-uterine polypus may be, in point of situation, vulvar—the polypus hanging in the vulva —that is, between the labia. A polypus intra-uterine in origin is, in the majority of cases, a vaginal polypus in situation; or, again, a polypus which grows from the interior of the body of the uterus may be intra-cervical in situation: and when you hear of intra-uterine polypi, or look at pictures or diagrams of them, what is generally meant is intra-cervical. A fibroid or a mucous membrane growth, if truly intra-uterine in situation, is very rarely a polypus. Except in the case of little mucous intra-uterine polypi, I have never seen an intra-uterine growth which was a well pediculated polypus.

An intra-uterine growth, not intra-cervical, is either sessile or has only a neck; it has no distinct stalk to make

it a polypus. You may easily perceive that, within the womb proper, there is no room for the development of a stalk to a polypus which is of any considerable dimensions. You must understand, then, that intra-cervical polypi are generally called intra-uterine, and wrongly so; moreover, they are easily diagnosed and managed, compared with truly intra-uterine growths, which are rarely, if ever, polypi, and have only sometimes a neck, never a stalk.

You see I do not attempt to make a new nomenclature: that is an easy proceeding which is rarely advantageous and still more rarely successful: but I give a designation to growths which are truly within the cavity of the body of the uterus, calling them intra-uterine tumours, not intra-uterine polypi, from their origin and situation combined; and it is only of such truly intra-uterine tumours that I intend to speak to-day. You will understand the rationality of calling a tumour or polypus according to its site of origin, and using other terms to denote the situation in which the body of the growth happens to lie, if you think of polypi of the nose. These sometimes hang down into the pharynx, and they are not called pharyngeal, but nasal polypi; and we are only carrying out the same rule of nomenclature.

To recapitulate, truly intra-uterine polypus does not exist, or is never seen except in the case of a small mucous polypus, such as I show you in this preparation, for there is no room for a stalk to develop to a tumour which attains even a moderate size. The most common uterine tumours are fibroids, and these may be vulvar, vaginal, or intra-cervical polypi, or intra-uterine, or submucous, or embedded, or subperitoneal tumours.

What I have already said indicates that a growth from the interior of the uterus almost invariably grows downwards. It begins within the cavity of the body of the uterus, and as it progresses it becomes, under the influences of growth and uterine contractions, intra-cervical, and then

it becomes vaginal, and it may even become vulvar in situation. Here are specimens showing this progress: In both, the polypi attached to the fundus have reached the vagina, and in doing so have shortened the uterine cavity, pulling down the fundus, partially inverting it, that is, making it convex interiorly with a corresponding concavity or dimple or cup on the outer or peritoneal side. But this is not invariably the case: a polypus may grow up instead of down; and to prove this I pass round a preparation in which you will observe an intra-uterine growth, almost the size of a small walnut, attached by a neck to the lower part of the cavity of the body of the uterus, and it is growing upwards into the cavity of the body, instead of downwards into the cavity of the cervix. Perhaps, if that woman had lived, and we had had a further history of that growth, we might have found that it ultimately descended, following the usual order of things.

One more word before I come to intra-uterine tumours. What are the polypi, intra-uterine in origin, but in situation intra-cervical? They may be polypi of the mucous membrane. Fibrinous polypi are characteristically intra-cervical, though not invariably so. Placental polypi are occasionally intra-cervical, but not generally. Then, there is a rare condition called cervical pregnancy, in which a mole or an otherwise healthy ovum has been pushed, in the process of abortion, out of the cavity of the body of the uterus, its original and natural site, into the cavity of the cervix, but still retaining its connections with the mucous membrane lining the body of the uterus. Lastly, you have fibroids, either as true polypi, or as spurious or false—that is partially or almost completely enucleated.

Now, what are the varieties of intra-uterine tumour? You have three forms of mucous polypi which occur in this situation: firstly, adenomatous, that is, consisting of hypertrophied glandular structures of the uterine mucous membrane:

secondly, what may be called molluscum, hypertrophy of the areolar tissue without glandular development; and thirdly, cystic tumours, where the disease is probably the accumulation of fluid within closed glands of the mucous membrane. This cystic degeneration sometimes accompanies or forms an addition to an intra-uterine fibroid. When I do not mention any particular kind of growth in my lecture to-day you will understand me as speaking of an intra-uterine fibroid. Besides an intra-uterine fibroid you may have a fibrinous polypus within the body of the uterus, or a placental mass—of which latter I have narrated examples in a former lecture. When you have an intra-uterine fibroid it is, as I have already said, a sessile growth, or one which has merely a neck, not a distinct stalk; it is, therefore, not a polypus. So far from being a polypus, the fibroid may only bulge into the uterine cavity, and I have repeatedly removed such when there was not even bulging to guide the operator. It may be a true intra-uterine growth, covered with mucous membrane or with a capsule of muscular tissue in addition; or it may be a spurious or false intra-uterine growth, having no covering, having been to some extent spontaneously enucleated; such a one was at first embedded in the wall of the uterus, and has been expelled, through an opening made in the mucous membrane and muscular tissue, into the uterine cavity, where it may be found as an intra-uterine tumour.

What now are the events which may arise in the history of an intra-uterine fibroid? It may, as in a case I shall presently narrate to you, cause a woman to bleed till she is at the point of death; and indeed, as I have repeatedly seen, the bleeding may prove fatal; or, again, it may give no trouble at all, being found only after death,—not so much as suspected before. It may be pushed down into the cervix; or farther, into the vagina; and perhaps even into the vulva: during which process a stalk is formed, which it did not before possess. It was not a polypus so long as it remained in its

place of origin, but when it reached the cervix it became one, whether of the true or false variety; that is, whether still encapsuled or partially enucleated. It may be in the course of this pushing down that it becomes enucleated, or it may be enucleated close to its original site, so as to have no covering and lie bare ready to be detached. It may even become completely enucleated; that is enucleated and detached. When detached it generally lies in the vagina and rots; but we have watched a case in "Martha" where the whole process of enucleation occupied only a few hours, with uterine pains, bleeding, and the expulsion of the tumour, not only into the vagina, but into the bed. Another result still may happen and is well illustrated by a case which was in "Martha" not long ago. The uterus seizes the intra-uterine tumour as it seizes a mole or a child, and pushes it out; but in the course of this process a stalk is not formed: the tumour pulls the probably thin, and therefore weak, uterine attachment with it; and consequently you see the woman with an inverted uterus. It is not a polypus which produces this effect; it is a sessile or necked tumour, which refuses, metaphorically speaking, to form a stalk, pulls the fundus down, and turns the womb inside out. The lower end of a fibroid polypus sometimes sloughs and thus becomes partially enucleated. In such a case there is often, and naturally, great alarm on account of the fœtor of the discharges, and the ragged unusual feeling of the mass.

These processes illustrate the polarity of the uterus, of which I spoke in a former lecture. In order that all this may happen you must have an inhibition of the lowest part of the uterine body while the upper segments are working. During the growth of the intra-uterine tumour you had an opposite condition; the lower segment of the uterus was closed and the upper segment expanded. Then comes the change in polarity, and the tumour is pushed into the cervix and onwards, forming a stalk, or bringing the inverted organ

with it; and all this happens generally with pains and bleeding.

Here is the proper place to tell you an important fact which will enable you to avoid what may be a distressing and serious error. In the course of such a history as we have been describing it may happen that the tumour comes down and again retires. If you examine the woman at one time, most likely while she is losing blood, a tumour will be found in her vagina; but when you return, perhaps intending to operate, there is no tumour to be found—it has gone up again. This occurs not only in the case of polypi and of tumours which are clearly and distinctly within the cavity of the uterus, but also in the case of some which are intra-mural or imbedded in the uterine wall, and are undergoing a process of enucleation and expulsion. I shall endeavour to impress this upon you by the history of a case which came under my own observation some years ago. It was a case of a large tumour in the vagina, which had several times threatened sudden death from loss of blood at the monthly periods, the amount lost being enormous. On examination, I found no tumour at all in the vagina; but there was evidence that the woman had a uterine fibroid, not a polypus. I wrote to my friend, who had sent her to me, and found what furnished an explanation of the difficulty. My friend had examined her during the loss of blood; and it was only necessary for me to wait a few days till it recommenced; and then there was a great fibroid, partially enucleated, down in the vagina, with tremendous flooding. That was not an intra-uterine tumour, according to the principle I have adopted of naming tumours according to their origin, but it was an imbedded tumour in the course of spontaneous cure by enucleation: yet it comes naturally and justly into the categories discussed in this lecture.

An important point I must now mention: it is that, for reasons which I cannot divine, you have two distinct sets of

cases—one, in which the cavity of the uterus is open and expanded; and another, in which no enlargement has taken place beyond what is required to contain the tumour. You will understand that the former are much more easily dealt with as to diagnosis and treatment than are the latter, where you have to force your way every step you make. In the former class of cases you have only to open the neck of the womb, and you can feel all the uterine cavity; while in the other class you have to force your way every fraction of an inch in making the diagnosis.

All the tumours I have been discussing in this lecture are diagnosed and treated very much in the same way. I have said that an intra-cervical tumour is generally spoken of as intra-uterine; it is easily diagnosed and treated; but it is quite a different matter when we come to intra-uterine tumours proper, and we have had several examples in "Martha" of the difficulties attending their diagnosis and treatment. The difficulty is increased by small size of the tumour, and by its highness within the otherwise unoccupied uterine cavity.

Suspicion, which does not reach the length of diagnosis, arises when you find an enlarged uterus, especially if it be also a little deformed: if the uterus be much deformed it is probable that the tumour is not intra-uterine. If the tumour is small you may have no evidence even of enlargement. Suspicion is first aroused in most cases by the occurrence of loss of blood, which may take place at the monthly periods, or altogether apart from them. This loss of blood it is which, in most cases, impels you to examine, per vaginam, in order to treat satisfactorily; for, without a complete diagnosis, treatment is very unsatisfactory. In some cases the intra-uterine tumour produces, in addition to loss of blood, copious serous discharge, or sometimes purulent discharge. I have seen several cases of intra-uterine fibroid in women, after the menopause, where the discharge was not

bloody, but gave evidence of an inflamed uterine cavity, endometritis purulenta, and was so profuse as to have effects upon the constitution very nearly as powerful as loss of blood.

How are you to make sure of the presence of an intra-uterine tumour? First, you are not to attempt to make sure unless you have sufficient reason; for the process of making sure is itself attended with considerable danger—the danger of septicæmia from the injuries the process may cause; the danger of parametritis or perimetritis—which must always enter into our consideration. Let us suppose, however, that the case is serious enough to demand that you proceed. You must get your finger into the inside of the woman's uterus to feel it. Examination by the probe is often spoken of, but it is utterly unsatisfactory: there is only one sort of probing that is conclusive for this kind of diagnosis, and that is with the living, educated, finger; the other hand aiding by acting in the bimanual method. This is especially successful in cases where the cavity of the body of the uterus is dilated; then you may be able to insert your finger without further ado, without previous artificial dilatation; or you may, by the exercise of a little force, push the finger through the external and internal orifices; or, again, you may succeed by pressure, while the neck of the womb is held by a vulsella, to prevent its receding before your finger, or to pull it down on your finger. Some of you may remember that in "Martha" very lately we examined and diagnosed a case in this way. But generally, and invariably in that class of cases where there is no dilatation of the cavity, you have to dilate every line of the neck and cavity which you wish to explore. Now, dilatation for the purpose of exploration of the cavity of the body of the uterus, when the cavity is not previously enlarged, is a much more difficult matter than is generally supposed, and is often only imperfectly done. You can push in your dilating apparatus, and keep it in by plugging the vagina, which will cause dilatation only as far as the tent

goes; and it is a very natural matter to be deceived, and think you have reached the fundus uteri when you have accomplished no such thing. I have often known this happen; it did so in "Martha" not long ago. We thought we had sufficiently (not completely) examined a woman's uterus; and it was only under the influence and urgency of her extreme danger from bleeding that we did so again, more thoroughly, and we found, very high up, a little intra-uterine tumour, which we removed, with the best results.

The best method of dilatation is by means of tangle-tents. Sponge tents are often used; I prefer the tangle, meantime at least. You must have a tangle-tent at least three inches long; because, as actually happened in a case which I mentioned in another lecture, where there was a little intra-uterine mucous polypus in an expanded uterus, the tangle-tent may slip right into the uterus and become hidden there, owing to its being too short. A uterus which is much hypertrophied may require even a longer tent than one of three inches to open it thoroughly.

Let us suppose that you have completed the dilatation; you have next to introduce your finger into the cavity so as, if necessary, to touch the fundus; and for this purpose you will probably require to hold or pull down the cervix with a vulsella, upon your finger, in the same way as you pull a glove on a finger. In one case, which I read to you in another lecture, we could not, in this way, arrive at a diagnosis, because the finger was not long enough to reach a mucous polypus, which was discovered only after the death of the patient, that took place from another disease altogether. In that case the cervix uteri was pulled down upon the finger as far as was possible, and yet the polypus was not reached. The uterus from os tincæ to fundus was four inches and a half long. Had it been a matter of extreme urgency to complete the diagnosis, the only way open to us would have been to push the fundus uteri down upon the

finger, as in bimanual examination, the hand being within the vagina.

It is quite easy to understand this difficulty when you are looking for a small mucous polypus high up in a womb which is occupied by a fibrous tumour. Polypi of this kind, growing in spaces left uncompressed by a fibrous tumour, are not rare, and I have seen great good result from their removal; but in many such cases it is mechanically impossible by any known means to reach the polypus so as to diagnosis or treat it.

I now come to speak of the treatment, and I recommend you to trust in "avulsion." Do not first separate the tumour and then take it off, but use avulsion, doing the two parts of the operation simultaneously. In the great majority of cases nothing else is required. You seize the tumour, with a vulsella, and with a slight amount of rotation pull it out: it is, if a fibroid, enucleated by the violence. Of course, if it is a fibroid and already partially enucleated, it comes away with no difficulty; but even if it is covered by a thin capsule, seizing it you can get it away without much trouble. When you begin, it seems impossible that an egg-sized tumour should come through an internal os that does little more than admit the finger, but as you proceed the os dilates under the influence of the polarity of which we have spoken. If you should require any cutting, I recommend you to use a pair of curved scissors, though this is very seldom necessary in the case of a fibroid. In the case of a soft mucous tumour, which is not a polypus, the process of removal resolves itself, involuntarily on your part, into one of torsion and pulling away. You seize the tumour with a pair of uterine dressing forceps, and pull it off just as you would pull off a nasal polypus. In both sets of cases the process is essentially one of avulsion. In the cases of adherent placental masses you peel off with your nail or with the tip of your finger.

I have treated a large number of these cases, but have never resorted to any means other than those above mentioned. Were I to do so I should throw a wire round the neck of the tumour and burn it off with a galvano-caustic apparatus. I have no particular objection to the écraseur, but I think the other is the nicer operation, and by it you have security against bleeding if you do not cut off the growth too quickly.

I shall now read to you a case in which the practice I have been describing was successfully followed. The case was a very alarming one, but very easily cured.

L. J., aged thirty-three; admitted February 16, 1878. Married for thirteen years; has four children, the last born three years ago; has had two miscarriages, the last four years ago. Catamenia began between eleven and twelve; always regular every three weeks; loss copious, with clots and hypogastric pain. Has had flooding, with clots, for eighteen months till nine days ago. Has been treated for retroversion, wearing a Hodge pessary, which was removed covered with fœtid discharge. Hypogastric examination reveals nothing abnormal. Uterus is retroflected and retroverted. Cervix enlarged, bluish, discharging opaque mucopus; posterior lip abraded and having several Nabothian follicles. Uterus not freely mobile, not tender. Cavity measures three inches and a half. During a short stay in the hospital she showed considerable improvement, apparently from lying in bed. Re-admitted on May 15, with continued loss of blood; very anæmic, the skin lemon-tinted. The cervix was on the 22nd dilated with tangle-tent. On the 23rd a larger and longer tent was introduced, and on the following day examination by finger discovered a dilated uterine cavity containing a blood-clot. On the 25th, under ether, the uterus was drawn down by a vulsella, a growth on fundus as big as a large hazel-nut was seized by the vulsella, and torn away slowly with rotatory movement.

It proved to be a fibroid, and had been enucleated in the operation, for its surface was everywhere fresh, and none of the capsule came away. After this operation discharge ceased; the woman rapidly regained her looks, and left the hospital quite well seventeen days after the tumour was removed.

You may ask what becomes of the capsule in such cases. In this case I don't know what became of it, but I think that in most cases it is prudent to remove by scissors portions of capsule which are large and pendulous; and I have repeatedly done it.

Formerly, these cases were mostly left without surgical treatment; or an attempt was made to ligature and strangle the neck of the tumour, if there was a neck, and gradually to tighten, and separate it, all for fear of bleeding, which was expected from quick severing of the connections of the uterus and tumour. This preparation, which I hand round, is of itself evidence that the process was sometimes a fatal one, for here you have a ligatured intra-cervical polypus, sloughing but still attached to the uterine fundus. Now-a-days, this process is never used. I have never made use of it in any shape; but I was taught it and have seen it resorted to. Bleeding is, for the most part, a mere bugbear; for nearly in every case there is none. It is chiefly in the case of mucous membrane growths that there is danger of hæmorrhage, which may probably be diminished, however, by giving ergot before the operation. If it should occur it may be stopped by a plug, which is a most valuable means of arresting hæmorrhage. This process of plugging you must see for yourselves, for it does not so well admit of description as to entice me to go on to give you an account of it in the present lecture.

You may cut through the body of a fibroid, and leave a bit in the uterus, without necessarily having important hæmorrhage. But this is an undesirable proceeding. At

present we have a case in "Martha" where, after two years and a half, the stem of a fibroid partially amputated by one of my predecessors, is still to be seen, dirty and greyish-black, and discharging a brown fluid, but otherwise giving no annoyance. The only case nearly resembling those under discussion, where we have had serious bleeding, was where the tumour was a muscular outgrowth, not a fibroid; it was attached high in the cervix; there was no neck. We cut through the tumour, and the woman bled severely; but a plug was efficient in arresting the hæmorrhage even in that case. This kind of tumour has a mucous but no muscular capsule like a fibroid. It is a continuous outgrowth of the proper uterine tissue.

All that I have said to-day has reference to a very important class of tumours which I have carefully differentiated from polypi, intra-cervical or vaginal. But, on the other side, I have not been so careful to discriminate them from embedded and sub-mucous fibroids.

These bring us to a department of uterine surgery which is only being developed at present. Many intra-mural and sub-mucous fibroids, which are more or less deeply embedded in the uterine walls, are yet amenable to the kind of treatment which I have been describing as applicable to those which are intra-uterine.

I have mentioned the unhealed wound of a uterine fibroid, years after it was partially amputated; and I now add that you are not to suppose that a fibroid may not heal up after injury. I know, by experience, that great lacerated wounds of fibroids heal very well, and that wounds made in them by the cautery heal very readily.

LECTURE XXIX.

ON CANCER OF THE BODY OF THE UTERUS.

The subject of this lecture is cancer of the body of the uterus, a disease forming part of a great class of diseases—cancers of the female genital organs and their neighbourhood—in regard to which a great deal has yet to be made out. The pre-eminently glandular organ, called the neck of the womb, is the most frequent seat of cancer in the female genital organs, but this pre-eminence is very much exaggerated. This arises partly from the fact that, as cancers in these parts go on, the neck of the womb becomes involved, and then the case—diagnosed, as most cases of cancer are, in a late stage—is put down as one of cancer of the neck of the womb, whereas really nothing is known as to where it originated. Lately, in "Martha," we have had thirty-nine cases of cancer in the interior pelvic region, and of these nineteen, or about one-half, have been put down as cases of cancer of the neck of the womb. But even with regard to these nineteen we have not invariably been certain that the disease ought to be so classified. We were sure that in each of these cases there was cancer of the neck of the womb, but whether the disease commenced there (and it is from the position of its commencement we should name such a disease) we could not tell. Besides nineteen cases of cancer of the cervix, we have had five cases which have been entered as cancer of the vagina, we have had four cases entered as cancer of the body of the uterus, we have had one case of cancer of

the rectum, and we have had ten cases which have been classed either as cases of pelvic cancer or as cases whose origin was not only unascertained, but unguessable. In a former lecture in this course I described to you a case of cancer commencing in the sacrum, osteo-sarcoma. Cancer may commence in any part, and before I come to the proper subject of the lecture I shall say a few words about an interesting case, an example of disease which probably began in the rectum, but, as you will see, now affects the uterus as well.

E. W., aged thirty-five, was admitted March 10. She has been twelve years married, and has had four children, the last three years ago, and she has not been in good health since that time. The catamenia have been regular till six months ago; since then she has almost constantly lost some blood, and there has been at times a yellow discharge. Complains of pain in the lower part of the back, and in both iliac regions, especially the left. Passes urine generally mixed with fæces. The latter are passed twenty times, or oftener, daily, with severe tenesmic pain, and with griping in the left iliac region. The disturbance caused by her bowels is very annoying during the night. The sister of "Martha" estimates the quantity of moulded fæces that is passed in a day as a full ordinary amount or rather more. Examination of the abdomen finds nothing abnormal except a distinct doughy feeling in the flanks and lower belly, evidently produced by accumulated retained fæces. The whole upper part of the pelvic excavation, as digitally examined per vaginam, is a hard mass, with deep fissures diverging from what is taken to be the situation of the cervix uteri, which cannot itself be identified precisely. This hard mass is only slightly displaceable upwards and downwards. The discharge is thin, blood-stained and not fetid. The rectum, as felt per vaginam, presents a hard rounded mass, as if it contained a scybalum of the size of a hen's egg. The finger, passed per anum

after permeating a pouch about one inch and a half in diameter, reaches a tight stricture in the seat of the egg-like swelling. It admits only the tip of the finger, and is situated in the midst of extensive fixed hardness.

This case presents an example to you of an accident which is not common in the diseases of women, except in cases of cancer. It is a curious fact that an ovarian tumour, a fibrous tumour, a perimetritis, a parametritis, a pregnancy, seldom cause great retention of fæces. When you examine some cases, as, for instance, two women with fibroids at present in "Martha," you would think it was impossible for fæces to get past the hard tumour jammed into the brim of the pelvis; and yet it is the fact that rarely do you see obstruction of the progress of fæces—such as you see here. Besides malignant disease, as in this case, the scybalum causing obstruction of the rectum is the most important cause of great retention of fæces in women. This is not extremely rare; I have seen it the cause of very great mistakes. In that case a woman passes liquid fæces round the scybalum; and the case may go on even for years, a proper motion never passing, the fæces which escape always coming in a semi-liquid form. That is not the case here. Here the fæces are positively retained, and are not scybalous; there is no feeling of round scybalous masses, but you feel the woman's belly is really stuffed with semi-solid fæces. In this case you will have noticed that we look forward to performing an operation for the relief of the patient's sufferings. Her sufferings are intense from tenesmus, accompanied by actual griping pain of a kind different from the disagreeable feeling of tenesmus. This relief we expect to be able to give her by colotomy. We propose colotomy in this woman because she is suffering a great deal, and because she has, so far as we can judge, the prospect of a considerable span of life yet—I mean a span of life not measured by years, but by a considerable number

of months—and it is surely worth while to let her have the imperfect relief which is afforded by colotomy. But on this I am not going to say anything more to-day.

Before I pass from this subject I wish to point out another very important practical fact, that while retention of fæces is frequently due to malignant disease, retention of urine (and of this we have illustrations at present in "Martha") is a state rarely accompanying malignant disease. Retention of urine is common in cases of fibrous tumour of the uterus; it is not common in cases of swellings, however large, produced by malignant disease. I may mention that lately we have seen urinary retention in a case of cancer affecting the vaginal orifice, and mechanically impeding the exit of urine.

You will notice that when I enumerated cancers of uncertain origin in the pelvis as ten, we called a good many of these pelvic cancer; and I wish to point out what is extremely well illustrated in one case in "Martha" at this moment. In that case the whole brim, the whole upper part of the excavation, is a solid mass; and when cancer of the neck of the womb is not present, you have, if the woman is young, a very difficult diagnosis. Now, what disease is there which is not at all uncommon, which is sometimes chronic, and which makes the whole roof of the pelvis, as in the old woman now in "Martha," like a board? It is chronic perimetritis. Some cases are quite easily diagnosed, but some are extremely difficult to diagnose; and I have often told you that, when you hear of a diagnosis being difficult, difficult may often be translated as impossible; time alone can enable you to decide in many of these cases whether the disease is malignant or not. The chief points on which to rely are the age of the woman, the history of the case and the absence of tenderness. Upon these particulars I shall not further enter, only insisting upon the great difficulty that exists in diagnosing pelvic cancer from chronic

perimetritis, especially in the case of a young woman. And the difficulty is enhanced by the fact that even in old women perimetritis of all kinds, including perimetric abscess, may complicate pelvic cancerous disease.

Before I pass from the subject of pelvic cancer I must mention another case accompanied by a rather rare symptom—discharge of fæces through the urethra. S. N., aged thirty-six, married; has had two children and six miscarriages. The last child was born fourteen years ago. Was admitted March 8, 1878, complaining of pain in left groin which had lasted for fourteen years, but has been much aggravated the last five months. Micturition is frequent and scanty, and with the urine come occasionally air and fæces. The brim of the pelvis is occupied by dense hardness, not tender. On the right side an extension of hardness along the ischial plane and below the cervix, which itself presents no great abnormality. The uterus is fixed in this hardness. Its cavity is of natural length and direction.

This is a case which, if the hardness had not the long promontory coming down along the ischial plane, and other characters which are easily observed but very difficult to describe verbally, would have been extremely difficult to diagnose from chronic perimetritis, because the woman was not elderly, and recently child-bearing. The diagnosis was corroborated by the passage of air and fæces through her urethra. The passage of fæces per urethram is a rare occurrence except in cases of malignant disease of the bowel, and especially the upper part of the rectum and the sigmoid flexure. You are not to suppose that the passage of fæces through the bladder is always the cause of much suffering, yet you would naturally think so. It generally only causes moderate suffering; in some cases, as in this, no suffering is mentioned at all. The passage of fæces through the bladder sometimes occurs in connection with peri- or para-metric abscess, ending in intestino-vesical

fistula. I have several times seen cases of chronic perimetric abscess where the abscess burst into the bowel and also into the bladder. Such cases are diagnosed by their history. The fistula in such a case I have known spontaneously healed. Let me caution you against a supposition which I have more than once found prevalent in the minds of practitioners of otherwise great experience—that the passage of fæces through the bladder must of itself be fatal. Nothing of the sort. I have known patients with this infirmity live long lives, and die of other diseases quite unconnected with the passage of fæces through the bladder. It is, however, a rare occurrence, and always, on account of the rarity of its connection with anything else, suggests or confirms the suspicion of malignant disease. In the case I have just read, the existence of malignant disease was placed beyond doubt by the circumstances mentioned in the history of the case.

Now I come to a class of cases about which our knowledge is still very imperfect, and which, of late years, is getting more and more isolated from the general run, from those that would be called of uncertain seat—cases of cancer of the body of the uterus. This is easily defined. A case is said to be of this kind if you have noticed it sufficiently early and find the body of the uterus affected by the cancer, while the neck of the uterus, so far as it is accessible, is healthy. It is a disease the rarity of which is exaggerated. Among the thirty-nine cases that I have mentioned, at least four were cases of malignant disease of the body of the uterus. This disease occurs in a variety of forms. I show you here, first, a magnificent specimen, an extremely rare one, of a uterus presenting diffuse, not deforming, cancerous, hypertrophy of the body of the uterus, the neck remaining, so far as the eye unaided and the finger can make out, quite healthy—a rare form of an uncommon disease.

The patient, an aged woman, began to suffer pain and think herself ill only about three months before she died. Her complaints were occasional attacks of pain in the hypogastrium, and occasional losses of blood per vaginam. She looked healthy for her years. Three weeks before her death she was admitted into the hospital under my care. A mobile hard tumour, of the size of a fœtal head, was felt projecting through the brim of the pelvis into the hypogastrium. It was rounded and not tender. She was seized with ordinary acute suppurative peritonitis, and sank in a few days. Cancerous nodules were found in the lungs and liver. The uterus weighed four pounds and a half, measured eight inches in length, and six inches and a half in breadth. Its cavity, from os tincæ to fundus, measured six inches. The walls of the body were about an inch thick. Examined by a competent histologist, the structure was declared to be that of hard cancer. Its section resembled that of a scirrhous mamma. The lining membrane of the body was thick and villous, only in some small parts destroyed. There was cancerous degeneration of the ovaries; and a similar state of some limited parts of the vagina was discovered after death. The cervix, although healthy to appearance and to digital examination, was discovered by the microscope to be the seat of cancerous degeneration. The case was diagnosed as a case of fibrous tumour of the uterus; and, were it occurring in my practice again, I have very little doubt I should again make the same mistake.

There are mistakes in medicine of which a man is ashamed; there are others which do not make him blush in the least degree—and this is one of them. I do not know how I could make that diagnosis correctly. The risk of error here is not like that in the diagnosis of a case of cancer of the pelvis; you would never confuse diffuse cancer of the body with perimetritis. The diagnosis lies between that disease and fibrous tumour of the uterus. If you look into books you

will see it justly remarked that one of the points of distinction is that in a case of cancer the womb is fixed, and so it is generally; in this case the womb was quite mobile. Here, also, another usual symptom was absent—there was no fetid discharge. There was bleeding, but that is also a symptom of uterine fibroid. In this case the cavity of the uterus was considerably lengthened, and so it often is in a uterine fibroid. In this case there were fits of pain, and these are not uncommon in a uterine fibroid. You are led to suspect that a case is malignant—and at a first visit it is only suspicion—by regarding the history of the case, the age of the woman (and I may remark that the age of the woman is in cases of cancer of the body of the uterus greater than in cases of cancer of the neck), the presence of hydro-peritoneum, and the induration and fixation, which can sometimes be made out, of neighbouring parts, especially of glands. Of especial importance is the age at which the tumour began to grow, for a fibroid does not begin to grow after the menopause. I have done enough to show you how very difficult diagnosis may be in a case of this kind.

I have spoken of elongation of the cavity of the uterus, and it is necessary to inculcate special care in making this out, in catheterizing the uterus, as it is often called. In all cases of cancer of the uterus is this care demanded, for then the uterus may be easily transfixed or perforated by the probe; and this is not the case with an ordinary or inflamed uterus. Besides, the transfixion involves little or no danger in ordinary cases. I have known it frequently done, in the same case even, without any evil result. Yet it is always a misadventure to be shunned. The peritoneal wound does not gape or bleed in such cases. It is otherwise in examples of cancer of the body of the uterus, and I have seen the fresh specimen in a case where this gaping wound by the sound proved fatal within a few hours after its production.

Now a few words on the mode of death. A woman with

a uterine fibroid is not very rarely affected with chronic peritonitis of various kinds, sometimes causing a collection of peritoneal fluid to occur around it; but this is very much more common in a case of malignant disease of the body of the uterus. In the present case you have another form of peritonitis exemplifying one of the modes of death in cases of cancer that is not very frequently described. Acute peritonitis of all kinds and chronic peritonitis are common with uterine cancer—local peritonitis, general peritonitis, and (the worst of all kinds) the acute suppurative peritonitis, which killed this woman in three days.

Besides peritonitis there are many other forms of death in cancer. It is only a specious concealment of ignorance that leads us to speak, as we often do in cases of cancer, of patients dying from exhaustion. I am very doubtful of that. No patient dies of exhaustion. You may say, "If a patient dies from bleeding, does she not die from exhaustion?" Very well; but that is dying from bleeding—that is, not undefined exhaustion. In the same way you find it often stated that patients die of pain. I never saw anybody die of pain, and I do not believe it occurs. So cases of cancer are said to end in death by exhaustion, as a man is said to die of old age. The truth, barely stated, is that you do not know of what he died. Now, the chief causes of death in cancer are peritonitis, uræmia, septicæmia, pyæmia, and complications from diseases of veins or degenerations of important viscera. Sapræmia (putrid poisoning without addition of a living ferment) often causes fever and purging, and may cause even death.

The second form of cancer of the body of the uterus to which I will direct your attention is the nodular—a disease which makes the uterus resemble not a single uterine fibroid, but a group of uterine fibroids; the nodules being different masses of malignant disease, deforming the uterus, almost certainly in this form of the disease fixing the uterus, almost

certainly projecting into its interior, frequently bursting through and giving rise to bleeding and other fetid discharge, rarely bursting into the peritoneum and giving rise to fatal peritonitis. The second form of cancer of the uterus is not so rare as the former; and here is a case of it.

M. L., aged fifty-nine, has been married for twenty-three years, and has never been pregnant. Complains of frequent and difficult micturition. Has constant pain in the lower part of the back and in the thighs. Has also a lump in the belly, which she says is increasing in size and has been felt for fifteen months. Her pains are severe at night, and she is rapidly losing flesh. Was in July an out-patient, and then had profuse fetid discharge, which has now ceased. Admitted February 22. A layer of ascitic fluid intervenes between the abdominal wall and the tumour in the hypogastrium. The tumour projects most between the navel and the right spina ilii. It is hard and forms part of a large mass, which, projecting from the brim of the pelvis, extends to the left side of the hypogastric region. It is only sensitive, not tender. The cervix uteri, not notably altered, is high up and far back in the pelvis, and forms part of a solid hardness, fixed, and occupying the upper part of the pelvic excavation, and easily identified with the tumour felt in the hypogastrium. The bladder is not tender, but contracted, measuring three inches from orifice of urethra to fundus.

This example was easy of diagnosis only because the woman was fifty-nine years of age, at which time you do not get fibrous tumours growing rapidly with much pain such as this woman had. There was, for this reason, no difficulty in diagnosing this case. There might have been great difficulty had she been a younger woman, and had we seen the case earlier. Then we should probably have had to watch it for a considerable time, for months, in order to satisfy ourselves as to its nature; but in an old woman, to have a tumour

growing rapidly, fixing the uterus, pain always aggravated at night, hydroperitoneum, form a combination of clear indications.

I come now to other forms of cancer of the body of the womb, cancer of the interior of the body of the womb. I have just mentioned to you cases of ordinary (medullary) cancer of the uterus projecting into its cavity. When this happens—and indeed in all cases of cancer of the body of the uterus—you have to keep in view the distinction recently made (but not proved to be, clinically speaking, well founded) between the fibrous and the epithelial cancers, between sarcoma and common cancer. A sarcoma of the uterus has nearly the same clinical history as ordinary malignant diseases such as I have been describing. Sarcoma is a malignant disease, only its progress seems to be generally a little slower than that of the ordinary forms of cancer, and it seems to be in a slight degree more amenable to treatment by removal. But really this distinction of cancers is too recent to have been fully followed out in its practical details.

The great malignant disease of the cavity of the body of the uterus is adenoma, a malignant glandular growth of the mucous membrane. Cases of this kind are not common. The growth bleeds, it distends the cavity of the uterus, fills it up, passes through the cervix, grows into the vagina ; and I have seen a case where this malignant adenoma filled the vagina, and, before the young woman's death, protruded at the orifice of the vulva, the whole mass being composed of soft adenomatous tissue. In "Martha" we have had a case probably of this kind. It was sent in as an ordinary polypus, but on examining it, superficially even, it was observed to be very soft and fragile. The stalk went right through the cervix into the body of the uterus, and it was made out at the time of operation to be a case of polypus of the body of the uterus, not a fibrous polypus, nor a mere mucous out-

growth or vegetation. On microscopical examination it was found to have all the structure of an adenoma. Dr. S. West found in it not only the uterine glands hypertrophied, and constituting the greater part of its bulk, but he also found in the centre of the tumour some muscular tissue; and a like observation has been made in some ordinary mucous polypi. Of this adenoma we have had no example except the polypus I have been describing.

I have lately seen cases of common malignant ulcer beginning high up in the uterine body, and such ulcers are quite different from the peculiar disease to be described in the next paragraph. To get the diagnosis of such a case in its early stage, while the womb is mobile, it is necessary to dilate the cervix and pull the womb by volsella in its neck down upon the finger passed through it. Such cancers soon became more diffused, causing tumours and fixation of uterus.

The last malignant disease of the body of the uterus I have to mention is one affecting its cavity, namely, ulceration. The ulceration seems often to follow a previous condition of villosity. The villosity is destroyed, and ulceration takes its place; or ulceration is itself the commencement. This ulceration affects, like all malignant diseases, chiefly the old; and it has in the vast majority of cases, the history of a malignant ulceration. But some recent investigations throw doubt upon the exact nature of the disease, although they do not entirely remove the malignant character from its ordinary clinical history. I am convinced that, speaking merely clinically, this disease in old women may be cured, if it is attended to early, by cauterization, by solution of nitrate of silver, of the inner surface of the body of the uterus. I have cured several cases of this kind where there was copious discharge which was fœtid, and copious bleeding; and in some of them I have felt the seat of the disease with my finger, quite easily distinguished from the healthy surface

of the uterus. This feeling the seat of the disease has only been done after dilating the neck of the womb by tangle-tent. In such cases, of course, the disease is not—as yet, at least—malignant; and I shall say no more of them. In the more severe cases you may try the same treatment; but when they get into this class they are irremediable. The treatment may check the discharge, and produce great temporary improvement of health. The patients die as in cases of ordinary cancer, sometimes with great suffering, and sometimes with little or none; and after death, examination, as I have just said, leaves considerable doubt as to the cancerous character of the disease. In several cases that I have examined lately there was no disease found except the ulceration of the interior of the uterus, and that not of distinctly cancerous character. In one which occurred in "Martha," there was found no evidence of real cancerous disease. In that case the lumbar glands were somewhat enlarged; but in two other cases even this evidence of extension was absent.

Ulceration of the cavity of the body of the uterus is characterized by great pain in some cases, moderate pain in others, and in others by no pain at all. The pain is in some cases evidently spasmodic, being so described and as resembling the pain of dysmenorrhœa, lasting only a few hours and returning daily or oftener, but occasionally intermitting. There are bleedings which are sometimes slight and sometimes severe. The discharge is always very copious, not always fœtid, and may be purulent or ichorous. The uterus enlarges, and, instead of having little more than a potential cavity, may come to have a cavity as large as would contain an orange. The ulceration extends deep into the tissue of the womb, and destroys it; it comes to affect the interior of the cervix, leaving the infra-vaginal portion untouched. It sometimes goes on to perforate the peritoneum, and in this way it may prove rapidly fatal;

but I have seen, in one case lately, the perforation met by adhesions, so that there was a peritoneal cavity or abscess connected by a fistula with the interior of the uterus. These peritoneal cavities get filled, of course, with the same filthy discharge which fills the interior of the uterus. The disease is easy of diagnosis. If you think proper you may go the length of dilating the cervix, so as to pass your finger in to feel the interior, and you may dilate the cervix for purposes of treatment—to wash out the interior of the uterus, and to cauterize it, if you think proper, with nitrate of silver or tincture of iodine. In all the cases which I have seen the disease has run a more or less rapid course, ending in death.

LECTURE XXX.

ON UTERINE HÆMATOCELE.

Lately addressing you I mentioned an important variety of hæmatocele, which I told you Nélaton described as retro-uterine, and this description by him forms the most important event in the history of the disease. The case about which I am to speak to-day is not a typical one of retro-uterine hæmatocele. I wish it were, for the retro-uterine is an extremely characteristic species of the genus hæmatocele, and is easily described.

What is hæmatocele? It cannot be defined in a few words. It is a tumour composed of blood, which may be in various conditions, such conditions being regulated chiefly by the age of the effusion. Do not imagine that every blood swelling in or near the pelvis is a hæmatocele. Far from it. If the uterus itself, or an ovarian cyst, be distended with blood, that is not a hæmatocele.

In order to be a hæmatocele the blood must be *enclosed*. I prefer this term to *encysted*, which is that commonly used. The latter is objectionable, because it conveys the idea of the existence of a special cyst, which there is not. Now, what is it that encloses the blood? The site of the effusion in the great majority of large and grave hæmatoceles is within the peritoneum, among the intestines, by which, and by parietal peritoneum, it is enclosed; the enclosure being completed by such adhesions as are necessary to make what may be called a cyst to hold it.

It is very common to say that hæmatoceles exist in the cellular tissue. Most assuredly they do, but I doubt whether these are the more numerous; at all events they are the less important. In these cases the enclosure is the cellular tissue, and the various organs. These I would much rather call by other names—hæmatoma, thrombus, or ecchymosis. Formerly, all hæmatoceles were thought to be in the cellular tissue; but, chiefly through Bernutz, we have become enlightened on this point.

Now, suppose blood escapes into the peritoneum, it is not yet a hæmatocele; but in time adhesions arise, which complete the enclosing of the blood, and make it such. For example, a woman has a tubal pregnancy; about the third month the tube bursts; a large amount of blood escapes into the peritoneum, causing death. This is not a hæmatocele. Had the woman lived it would have become one. I have had an opportunity of examining a case of this kind before the blood became enclosed; and it is very difficult to diagnose such during life, because the effusion is so soft and so displaceable. When it becomes enclosed there is a recognizable tumour, and generally what would be called a hard one. This is now the disease we have to speak of to-day.

Where does the blood come from? It is very difficult to say. It may occur from the bursting of an extra-uterine pregnancy; it has been verified as coming from the opening of a vein in the pampiniform plexus of the ovary. It may be a little phlebolite which causes ulceration, and this gives rise to a small opening through which blood is poured forth. Rupture of the ovary has been proved to be a cause, not only the physiological rupture of a Graafian vesicle, but a rent in the whole tissues of the ovary. In all such cases it is evident that the blood must escape into the peritoneum, and not into the cellular tissue. In the majority of cases the blood comes from that source whence, in a woman, bleedings are most frequent and important. In menorrhagia, polypus,

fibrous tumour, hæmorrhage following abortion, or delivery at full term, it is the mucous membrane lining the cavity of the uterus which bleeds; so it is, I am convinced, in the majority of uterine hæmatoceles, the blood flowing into the peritoneal cavity through a Fallopian tube. The inner orifice of a tube is generally looked upon as always closed, and it is rarely seen otherwise; but it is a sphincteric opening, like the cervix uteri, and is often found by probe to be open.

Now for a few details regarding the case before us, which, though not retro-uterine, offers many valuable points for teaching.

A. B., aged twenty-three; married two years; never pregnant; began menstruation at fourteen years of age; always regular, sometimes losing rather profusely. About three weeks before entering the hospital the last period commenced, and continued for only three days instead of four, as usual. Notice that a period stopped before the expected time. About two days after the cessation she was suddenly seized at night with pain in the abdomen, and in the morning she found a swelling in the lower part of the belly, which has remained ever since. Next day menstruation recommenced. Mark this also. She became feverish. When admitted the temperature was 100°, and she had a florid cheek. Note this expression; it was not a florid complexion (the term employed by the clinical clerk), but only a red spot on the cheek, the remainder being anæmic.

A large prominent swelling occupied the whole of the lower half of the belly, extending up to within two inches of the umbilicus; tender, dull on percussion, a smooth uniform surface, elastic, fixed. It became less and less tender, smaller and smaller, and about a fortnight after she entered the ward it had almost entirely disappeared. The temperature and pulse became natural. Nothing was to

be felt but a little hardness, due to remaining adhesions. She declared herself quite well, and had then a florid complexion. The red spot on the cheek was lost.

Now, had this been a retro-uterine hæmatocele, the uterus would have been jammed against the pubes, and behind it you would have felt a large mass, like a retroverted gravid uterus. Instead of this, all that could be felt per vaginam, by pressing high up behind the uterus (which was nearly in its natural position), was the lower part of the tumour, round, smooth, and tender. The case which I have described shows what a definite, well-marked disease uterine hæmatocele is. Nothing hazy about it. And when, later on, I speak of its history, you will be astonished.

I shall now tell you how this case was diagnosed. Unless the history is very distinct, well marked, and nearly sure, the diagnosis is very difficult. I have had many occasions to say—This is a hæmatocele—either before a woman's death or before opening the tumour, and when I have once decidedly said so I have not been wrong. What are the points which have guided me to a conclusion? They are all well illustrated in this case.

First of all I must tell you that what we generally have to diagnose it from is an abscess, retro-uterine or other, and there are three principal points: 1st. Suddenness of symptoms, and suddenness of tumour. 2ndly. Derangement of the menstrual function, in the way of arrest: in the most typical cases there is a sudden stoppage, and then the pain. 3rdly. Anæmia.

When this woman came into the ward, the history not having been taken, hæmatocele was diagnosed, but with only a very moderate degree of assurance. The diagnosis was from an abscess. In a former lecture I described a case of retro-uterine perimetric abscess, which was very like this in its physical characters, but there was the absence of sudden-

ness and menstrual arrest. The symptoms of suppurative fever were also present in that case.

Diagnosis was direct, and the induction was from the three circumstances which I have enumerated. I presumed that we should probably have another element of direct diagnosis in the future history of the case. When the disease had lasted five weeks—that is, a fortnight after admission to the ward—the tumour was gone, and nothing had come out of it. There had been no evacuation of pus, no diarrhœa. The patient had been getting better every day, and the lump was melting away like a snowball in the sun.

Let me take this opportunity to say a few words about diagnosis. It is the first step in all medicine, an art which is in a very uncertain state. I have often seen practitioners prescribe, and then set their brains to work to ascertain what is the matter. When you treat a patient without knowing what his disease is, you are shooting crows with your eyes shut. Diagnosis is, therefore, what you must first aim at, direct diagnosis if possible. But you are often glad of another—a limping method—diagnosis by exclusion, a method founded on the axiom:—If you don't suspect a disease, you are not likely to find it out.

Here is an abdominal tumour, and we may commence to exclude. A cyst is suggested, an ovarian cyst, a parovarian cyst; a renal tumour, or hydronephrosis; a perimetric abscess; hydatids; then, perhaps, a fibrous tumour, or pregnancy. We run over these hastily in our minds. Can it be one of them? It is a very shabby method of diagnosis, but we are bound to use it in order to do our best for the patient. The history of this case proved that the diagnosis, made both directly and by exclusion, was correct. There is no tumour, except one composed of blood, that will go away thus rapidly while a woman is lying in bed, without any evident evacuation. The diagnosis was not only direct and by the history, but also by exclusion. Our last

case of perimetric abscess, a tumour very like this hæmatocele, went away quite as quickly, but pus flowed in torrents from the bladder.

Now, from what you have heard of the case before us, you might say this is a very trifling disease—cured at once. That would, however, be a very wrong idea. It is not every such hæmatocele that goes on like this. Sometimes the tumour increases instead of diminishing; or it diminishes and then suddenly increases again; or the peritonitis which is induced may not be simple adhesive, but a great abscess may form; or the blood may putrefy, and produce septicæmia. Or the tumour may burst into the bowel, which, though often a fortunate termination, occasionally leads to septicæmia by fæculent matters getting into the cyst. Sometimes the tumour will not go away, absorption will not take place; why, I know not; but it may have something to do with pressure relations.

With regard to the treatment. The patient was simply kept in bed, and this is the most important treatment of all. Probably, had she moved about, the result would have been very different. But sometimes we have to direct our attention to endeavour to stop the bleeding. I have no great confidence in anything for this, but I will tell you those remedies which appear the best, and in their order of merit —1st, perfect rest; 2nd, ergot of rye; 3rd, ice poultices. I fancy I have seen benefit from these last, but I have also, I believe, seen harm. Then, if you have been brought up in the antiquated school, you will believe in sorbefacients. I don't believe in them. Muriate of ammonia lotion; tincture of iodine. You may prescribe them, for perhaps they will please the patient. The further treatment depends upon circumstances.

It is sometimes very difficult to decide whether or not to evacuate the cyst. In the great majority of cases it is unnecessary. I have used both knife and trocar, and I do

not see the objections to their employment which are entertained by most gynæcologists.

After opening the cyst I advise you to take care of two things. In the book of an eminent gynæcologist you are recommended to insert the finger through the artificial opening, and break down bands or adhesions in order to let free the blood mass. The writer was under the delusion that the blood is situated in the cellular tissue; it is, however, in the peritoneum, and the adhesions are the safety of the woman. If, therefore, you attempt to break these down you will be doing the very worst thing.

Another treatment, which has led to many fatal results, is injecting the cavity by means of a strong syringe, to wash out the blood, the consequence of which is that the adhesions, the beautiful protective arrangement of Nature, are damaged. Syringing does not secure absence of decomposition or of putridity of the bloody discharge. I have seen many women with this fœtid discharge, and all the symptoms of intense sapræmia or putrid intoxication; and as soon as the cause was got rid of they got well.

I now come to what I told you would astonish you—the history of the disease. Hæmatocele was unknown when I was a student. I studied medicine in Aberdeen, Edinburgh, London, and Paris, and in none of these places did I hear of such a disease. It is now most difficult to conceive how this most manifest disease could have passed unnoticed. If you consider a gold field—at first great nuggets are discovered, then smaller ones; then to find gold the sand has to be sifted; and lastly, there is none at all. So in anatomy and pathology, great discoveries were at one time easily made, but now we have to get a microscope with a lens of the highest power to find anything new. When I was a student we had only morbid anatomy, now we hear of nothing but pathological histology.

With regard to uterine hæmatocele. Here was a nugget

of the largest size which remained practically undiscovered till a few years ago! This is a remarkable subject for reflection, and shows how carefully we should scrutinize our cases, for there may be some as great nuggets buried in the field of medicine even now, when we think the time for such gross discoveries is past.

These great tumours must have existed in former times. What did physicians make of them? I have read of the cure of large fibrous tumours in a week or two, of large ovarian cysts being dispersed in a very short time by some marvellous medicine. You will find among good authors plenty of such cures. No doubt some of these so-called tumours were hæmatoceles, and would have disappeared just as quickly without the imposing remedies.

Besides hæmatocele, women are liable to hæmatoma or effusion of blood into the cellular tissue of the genital passages. Such hæmatomas of a limited kind are common after confinement, especially near the cervix uteri, and escape attention. Sometimes, after uterine ruptures, they are enormous. They are often seen in post-mortems. But, apart from childbirth, hæmatoma, though rare, is well known. Its characters do not differ greatly from those of hæmatocele; but it is more likely to be one-sided, between the layers of a broad ligament, displacing the uterus to the other side. Like hæmatoceles some hæmatomas do not get absorbed and demand operative interference.

LECTURE XXXI.

ON PAROVARIAN DROPSY.

The subject of this lecture is a case of simple parovarian dropsy, which has just been dismissed from "Martha." It is not, in respect of the fluid drawn off, a perfectly characteristic example of the disease, but it is on the whole very nearly so, and well worthy of your attention.

In this region of the body there occur several kinds of cysts, besides the well-known fibro-cystic uterine disease, simple ovarian cysts, dermoid cysts, and the different kinds of multilocular dropsy of the ovary. There are the cysts sometimes named after Follin, little blebs, which are frequently very numerous, scattered over the tubes and broad ligaments; they are not discoverable during life. There are the metro-peritonitic cysts of Huguier, perhaps rather a kind of vesicular œdema than a true cystic formation; these also have, as yet, no practical significance. There may be cysts of the ducts of Gärtner. There is often observed in post-mortem examinations a little cyst hanging by a long stalk from the outer end of a Fallopian tube; it corresponds with the hydatid of Morgagni in the testicle, and is the dilated closed end of the duct of Müller, the part of which nearer the uterus is transformed into the tube and its infundibulum. There are cyst-like dilatations of one or of both Fallopian tubes, not to be diagnosed from small parovarian cysts.

The parovarium in the female corresponds to the epididymis in the male; and it consists of a series of tubules

running from the hilus of the ovary along its mesentery towards the neighbouring tube. In the disease, of which we have had recently a fine specimen in "Martha," one of these tubules is dropsical, distended with a thin fluid. It is said that the affected tubule is generally one of those most distant from the uterus. In most cases, but not invariably, one tubule only is affected, and the cyst is truly, anatomically, unilocular. It has been observed to be bilocular in rare examples, or even trilocular; but, in the disease we are now describing, the cyst is never multilocular, never proliferating.

Some authorities say that cysts, indistinguishable from the parovarian cyst during life, do occur in the ovary—simple serous ovarian cysts. I have seen many such, but never one that was of great practical importance from its size, never one that might be confounded with multilocular ovarian disease. The disease we are now considering is simple parovarian cyst. We are not at present concerned with complicated cases, or cases not simple, whether the complication be inflammation of the cyst, hæmorrhage into it, or the occurrence of proliferation in a malignant form, such as Olshausen has recently described.

Simple parovarian dropsy is an important disease, and very alarming, for it naturally excites suspicion of the presence of the terrible ovarian cystoma, or multilocular ovarian cyst. Twenty years ago, or even less, it was generally confounded with this disease, and there can be no doubt that many of the spontaneous or artificial cures of ovarian dropsy were not so, but really cures of this disease —the simple parovarian cyst. It is spontaneously cured by rupture, during pregnancy, or apart from that state. It may, perhaps, be cured by absorption of the fluid. It is often cured by one tapping: or rather does not become refilled. But the present state of our knowledge indicates that an ordinary ovarian cystoma is never spontaneously

cured, never entirely disappears, never becomes empty and collapsed and remains so. Ovarian cystoma is generally cured, only by ovariotomy. Yet there is no doubt that, in some rare cases, an ovarian cystoma gets smaller, its contents partially absorbed or inspissated; it is, indeed, sometimes virtually cured spontaneously, but very rarely.

Next to the truly unilocular condition comes, as an important feature of this disease, the character of the fluid. It is almost pure water, having a peculiar opalescence like that of lime water, or of a quinine solution. Very little or no albumen is found in it, but appropriate tests show the presence of the chlorides of sodium and potassium. In the sediment there may be occasionally detected cylindrical epithelial cells in the midst of other detritus. The specific gravity of the fluid is low, generally, as in our case, under 1008; whereas that of ordinary ovarian dropsy is much higher, ranging from 1010 to 1025, or still more. In our case the fluid was not perfectly characteristic, but nearly so; it had a yellowish tinge, probably from some slight mixture of blood with the fluid taking place a long time ago. It did not otherwise vary from the regular parovarian fluid. In a case which is not simple, the fluid may have quite other characters, from the admixture of pus or of blood, or of both in various quantities. I have seen it like honey in consistence, and like coffee grounds in appearance. The pure watery fluid of a parovarian cyst is sometimes found in one of the cavities of an ovarian cystoma.

A parovarian cyst was, till recently, supposed never to attain a considerable size, seldom to be larger than a fœtal head; and this was very misleading, for the dimensions may be enormous. Here I show you one which is far larger than a gravid uterus at full term; it would, indeed, accommodate several adult fœtuses.

The characters of a simple parovarian cyst which I have gone over are to be made out during life. After death, or

after the removal of the cyst, you find other distinctive characters. The most important is the easy peeling off of the peritoneal coat, or enucleation of the cyst proper from its peritoneal investing sac. In the case of an ovarian cystoma there is no peritoneal coat, and, if you try to tear off an outer albugineous coat, you merely strip off irregular patches, producing nothing like the easy separation of coats seen in the true simple parovarian cyst.

Such is a sketch of the disease we have illustrated in the case of M. M., who has recently left the hospital—a disease which in her has been at a standstill for about three years, and has now at length, on account of its cumbersomeness, led her to seek its removal.

The chief facts of the case are as follows:—M. M., aged thirty-nine, married; has had seven children and three miscarriages. Her last pregnancy ended naturally five years ago, the delivery being completed by forceps. The catamenia began at seventeen years of age, and have been generally regular. Three weeks after her last confinement she observed that her abdomen was of the same size as before her delivery; and for two years it continued to increase. Since then she thinks it has been stationary. The abdomen is very large, semi-globose, distended from pubes to sternum. Over its anterior surface, and well backwards towards the flanks, there is absolute dulness on percussion. Over every part of the dulness, and in every direction, there is perfect fluctuation. The most prominent part of the belly is three inches above the umbilicus, and here the circumference is forty-two inches. At the umbilicus it is forty-one. The distance from the ensiform cartilage to the umbilicus is ten inches; from the umbilicus to the pubes seven and a half inches; from the umbilicus to the right anterior spine eleven inches; to the left ten and a half. There is no fever or derangement of any kind.

You will observe that the disease was chronic, much

slower in its progress than an ordinary ovarian cystoma, lasting five years before she sought advice; observe also—not a word of complaint. In truth, the enlargement and the weight of 400 ounces of water produced no symptoms proper; and it was plain the poor woman scarcely thought it worth while to have anything done for herself. She felt no need of relief. This absence of symptoms is a very important matter, for it shows that this disease has no essential or necessary symptoms; and the same is true of ovarian cystoma. Many diseases have essential symptoms, of which the most common is pain. Here we have none. Every case is not without symptoms, even varied kinds of suffering. But the utter absence of them in our case shows that their absence is no indication of absence of disease.

While there were no symptoms, the signs of disease were very distinct, and in a great degree distinctive. The short statement of the chief phenomena of this case that I have already given describes the signs. The signs enable us to diagnose the nature of the case. The direct diagnosis is, however, not so perfect as to allow us to dispense with the differential diagnosis or diagnosis by exclusion, but it is nearly so. It is only on the direct diagnosis that I shall have time to make any remarks to-day. The direct diagnosis enables us with considerable assurance to say—this is a case of simple parovarian cyst. The differential diagnosis justifies us in saying—this is not hydramnios, not ascites, not chronic peritonitis with effusion, not ovarian dropsy, not fibro-cystic disease of the uterus, &c.

The abdomen was greatly enlarged, and had a smooth hemispheroidal outline with no irregularities; it felt as if full of fluid. These circumstances are consistent with unilocularity. It had a projecting, rounded, shaped, not loosely flattened, form; there was no history of disease that might produce it, no evidence of peritoneal adhesions around it, no change of the area of resonance

on changing the position of the patient—circumstances which indicate that the fluid is encysted. The repletion of the cyst with a thin fluid was not made certain by its feeling as if full of fluid, but was made almost certain by perfect fluctuation producible everywhere in it. The perfection of the fluctuation, and the easily produced wave from any part to every other part showed that the cyst was unilocular. Thus we diagnose an unilocular cyst full of thin fluid. But this does not complete the diagnosis.

Before advancing I wish to impress on you some very important matters regarding "feeling fluid" and "fluctuation," terms which are generally misconceived and misapplied. The true appreciation of these valuable signs will save you from many and frequent errors.

Feeling fluid is a very common sign. It is often, indeed generally, called feeling fluctuation; but it is quite another thing. When in the midst of inflammatory induration you feel a soft portion, you have a high degree of assurance of the presence of fluid; but this assurance comes as much from the history of the softened part as from the actual sign. The history and the sign together may in many instances give you a high degree of assurance, approaching to certainty. The feeling alone is very deceptive, and it is by itself that you have to study it in order to make out its true value. I know few more prolific sources of error than confidence in "feeling fluid." Dry tapping, as it is called, does not always show an error in the operator; for he may have tapped while conscious of uncertainty as to the presence of fluid. But dry tapping is, after all, a common error; and how often is an inflamed mamma incised when there is no abscess, but only the misleading feeling of fluid?

You should all carefully learn the invaluable sign "fluctuation," in a case like the one we are now describing. You percuss or gently strike with a finger or fingers, and produce a wave, which your other hand or the fingers of it

receive. It has to be distinguished from a communicated impulse, which may be transmitted through soft parts which contain no fluid. When you feel fluctuation, you have a valuable positive sign of fluid—an almost infallible sign. You must not say you think you feel fluctuation; for then you had better say you do not feel it. You either feel it or not, just as you feel the pulse or not. If you feel it, you do not say you think there is fluid; you say, there is fluid. Perfect fluctuation shows that the fluid is abundant, and not in separate cysts, but it does not show, infallibly, that the fluid is thin and may be drawn off; for good fluctuation may be, in very rare cases, felt in a copious fluid diffused in sparse tissue, as in some abdominal tumours.

In the case before us, perfect fluctuation could be easily produced between any two parts of the cyst. This is another valuable sign. It shows nearly certainly, that the cyst is unilocular—a single-chambered bag. Were there two or more large chambers, the fluctuation would not be perfect in every direction. The dissepiments between the chambers would arrest the wave more or less completely.

Let us now consider what we mean by unilocular. I have told you that our parovarian cyst is unilocular. It is truly, pathologically, or anatomically, or scientifically, or absolutely unilocular. Again, I have told you that by use of the sign, fluctuation, we have diagnosed its unilocularity; but in truth, we have not diagnosed its real or anatomical unilocular condition. We have only made out that it is surgically unilocular; unilocular for such purposes as those of the ovariotomist. Small cysts in the wall of the large cyst, or connected with it, producing anatomical or pathological multilocularity, would not damage the fluctuation sign of unilocularity. It is, therefore, only a surgical or conditional unilocularity that is shown by this sign.

We tapped this cyst in the ordinary way, and drew off twenty pints of fluid. After tapping, we had another

evidence of the unilocular character of the cyst. We could feel no cyst at all. It had not collapsed into a ball or mass, as it sometimes does, but lay so as not to be felt. I have felt such cysts after they have shrunk; but even then not distinctly. After tapping, the bowels descended and filled the belly everywhere, resonance being produced on percussing every part. No coherent masses of bowels were felt, as is usual after tapping the fluid collected in a case of chronic peritonitis.

I may here mention to you a rare dissection recorded by Professor Gairdner, which shows what happened to a parovarian cyst in one case. His patient had a large abdominal swelling, produced by a great cyst, which suddenly and unexpectedly burst, and the swelling disappeared. Sixteen months thereafter she died of Bright's disease. Dissection revealed a small parovarian cyst, which was empty, and if distended might have equalled in size a fœtal head. The place of rupture was made out by Dr. Coats, and was shown me by Professor Gairdner. Though the rupture was healed, the cyst had shrunk and had not refilled.

The case illustrates the treatment of the disease. When simple, as in M——'s case, it is sometimes cured by one tapping. What becomes of the cyst we may guess from the state of it in Professor Gairdner's case. I have tapped several such cases, where I have for years followed the patient, and found the cure permanent. Sometimes it refills.

But all parovarian cysts are, unfortunately, not susceptible of such easy and successful treatment. Complicated cases may even require an operation like ovariotomy. I have seen several such operations, where there was extreme difficulty from adhesions, and from the thinness and lacerability of the sac. The proper treatment of complicated cases is not yet decided.

In simple parovarian cysts your course is plain. By tapping and examining the fluid you complete your diagnosis, you relieve the patient's and your own mind from fear of disease of a graver kind, and you hold out to your patient the prospect of complete and permanent relief.

LECTURE XXXII.

ON RUPTURE OF OVARIAN CYSTOMA.

Of this accident we have recently had an example in "Martha" ward, and I shall commence the lecture by reading an account of it.

S. L., aged forty-nine; married nine years; one child eight years ago. Catamenia began at seventeen, and ceased two years ago. No definite history of the present illness can be obtained. She says that she has been confined to her bed for three months; has suffered for some time from constipation, and also from vomiting. Has not noticed any lump in her abdomen. Has become emaciated. When admitted, suffering from constant vomiting of a dark-green fluid. Countenance pinched and anxious. Pulse small and feeble, 132. Temperature 99·6°. Lies on her side; legs drawn up. Breath has smell of new-mown hay. Belly very prominent and tight; measures at umbilicus 35½ inches, is resonant in nearly every part, presents fluctuation beneath the umbilicus from side to side. Brim of pelvis occupied by great fulness and hardness, as felt per vaginam. Ordered to be fed with iced milk and beef-tea; to have hypodermic injections of morphia to allay pain; and to have a careful trial of the best means for subduing vomiting. She was hopelessly ill —indeed almost moribund on coming to the hospital; and she died four days after admission.

Post-mortem, fifty-five hours after death.—Body somewhat wasted. Rigor mortis well marked. On opening the belly,

air at once escaped, subsequently followed by a yellow pus-like fluid. At the lower part of the belly was a large tumour, filling this part and the whole of the pelvis. Above the tumour was a cavity from which the greater part of the fluid escaped. This cavity had for walls the anterior part of the small intestines at the back; the omentum and abdominal walls at the front; above, the transverse colon. This cavity was clearly marked off by firm adhesions from the rest of the peritoneal cavity, and was larger in size than a man's head. The smaller intestines were to the left of the cyst. Liver, spleen, stomach, and intestines all matted together by old adhesions. Stomach and intestines natural on mucous surfaces. Liver pale, friable, fatty. Kidneys small; capsules somewhat adherent. Cortex of natural breadth, but pale and indistinct; pyramids pinkish.

On lifting up the cystoma at the bottom of the belly there was seen in a cyst to the right, overhanging the linea innominata, a gaping aperture the size of a florin, communicating with the cavity in the peritoneum described above. The fluid flowing from the burst cyst was dirty-yellow, like a mixture of ovarian fluid and pus. Around the orifice the tissue of the cyst was in a sloughing condition for a considerable distance from the margin. There were old adhesions, between the body of the uterus and the large mass of the cyst, springing from the left ovary. The cysts were ordinary ovarian cysts, the largest being about the size of a cocoa-nut, holding gum-like or honey-like fluid; in some the fluid was thinner. Right ovary natural. Bladder somewhat injected. Uterus natural. Vagina mauve-tinted.

Here was a remarkable and very interesting case. You observe the symptoms and signs were, very quick pulse, temperature slightly elevated, uncontrollable vomiting and a tympanitic abdomen, no tumour to be felt except by vaginal examination, and then only hardness in the brim of the pelvis, suggesting little more than the idea of a tumour.

With these signs, and an imperfect history, the diagnosis was extremely difficult or insecure; and when I said "I fancy this is a case of burst cyst," it was more a conjecture than a diagnosis. It turned out to be thus far true; but in some other respects, my ideas respecting the case were not altogether correct, for I believed her to be dying from peritonitis acutissima, as a consequence of the bursting of a cyst. What were the signs which led me to this last conclusion? They were an extremely distended tympanitic abdomen, with intense tenderness, and distressing uncontrollable vomiting. But, if you have followed the account of the post-mortem examination, you will have seen there was no acute general peritonitis, for there were extensive old adhesions which had nothing to do with death, but which had an important influence on the progress of the case, limiting the diffusion of the irritating escaped ovarian fluid and the consequent peritonitis. The ovarian cyst was lying in a peritoneal, perioophoric, abscess; the parts around being matted together by recent lymph, forming a great abscess cavity, in the bottom of which lay the ovarian cyst, nearly the size of a man's head. You observe she had an intra-peritoneal abscess as the result of this rupture. The adhesions saved her from acute diffuse suppurative peritonitis.

She did not die from peritonitis, nor from this peritoneal abscess, but from putrefaction of the sloughing cyst and its contents, which developed a quantity of gas in the sac of the abscess, and thus gave rise to a form of abdominal tympanites. Now this is not an ordinary condition, and the inquiry is suggested: Why should a slough which is under antiseptic conditions putrefy? This is probably from the neighbourhood of the bowels; and there are many analogous cases. I have seen the same result in a case of pelvic hæmatocele, when probably nothing had been effused into the peritoneum except pure blood; but we must dismiss this subject. Our patient died of sapræmia and septicæmia,

her blood becoming poisoned by the absorption of putrid matter. The intensely strong smell of newly-mown hay from the breath was indicative of this, as well as the whole progress of the case. The mere burst cyst and the intra-peritoneal abscess do not account for the case. She might have made good her recovery had there not been septicæmia.

Ruptures occur frequently in women, in the lower abdomen, and especially during the child-bearing period of life. First, there is the periodical rupture of the Graafian follicle, from which escapes the ovum, the fluid of the vesicle, and possibly a little blood; the rupture being sufficiently large to admit the extremity of a good-sized probe. This is a physiological rupture; but pathological ruptures in this situation are not uncommon. There occurs rupture of the ovary itself, a lesion which has occasionally led to fatal results; the ovary being found split open as though it had been incised by a dissecting knife. Well-known ruptures occur in the uterus in connection with delivery. There happens also occasionally, during delivery, a curious rupture of the peritoneum covering the uterus, which is, as yet, inexplicable; a beautiful example of this has been shown to me at this hospital by Mr. Butlin. Then, during pregnancy there has been observed erosion commencing in the peritoneum, and penetrating a large uterine sinus, resulting fatally by peritoneal hæmorrhage. Also, a vein in the broad ligament may give way, just as a varicose vein in the limbs does. This is said to be the result of ulceration produced by a phlebolite, and the consequence is escape of blood. Another rupture is that of the Fallopian tube in extra-uterine pregnancy. I am sure that the rupture of small serous cysts in the ovary is quite common. Sometimes a small ovarian cystoma, not larger than an orange, will rupture. I have myself seen an example of this. A woman was found lying dead in the road, supposed to have been ill-used; a judicial examination was made, and death

was found to have been due to hæmorrhage from the rupture of such a cyst. Then, frequently, small cysts situated on the surface of larger ones burst; as may often be observed when ovariotomy is performed.

What I have more particularly to speak of is the bursting of a large cyst, of which so good an example has formed the basis of this lecture. Rupture of such a cyst may be produced by ulceration, but this is probably very seldom a cause, the influence being generally mechanical; either distension by blood, pus, or ovarian fluid, or external violence. It may occur from handling a cyst, without such rudeness as is called violence. In some cysts the walls are very thin, and they become softened by inflammation or fatty degeneration, or sloughing, so as to be rendered excessively lacerable. This teaches us that ovarian cysts should always be very gently handled. I have seen a cyst so frail that slight pressure at one part made it burst at a remote part. The case just read was one of rupture by ulceration and sloughing; and we have lately had the sudden death by peritonitis of a woman who was waiting to be operated on by ovariotomy, and in her the rupture was by ulceration, a round hole of the size of a sixpence being found after death, looking as if it had been punched out. These ruptures or holes are often in limited, yellow, hard, long, dead areas of cyst wall.

If the cyst bursts, what results? The woman may bleed to death, if bleeding into the cyst be the cause of rupture. Rupture of a cyst probably always produces a certain amount of peritonitis, generally of a kind of which little is known. If a cyst burst the fluid of which is quite bland, often no pain is produced, but probably this low form of peritonitis which may last a long time without even producing adhesions. The peritoneum is red and raw-looking, sometimes with large areas which are covered with a granular lymphy deposit. This peritonitis produces friction

which may be sensible to the hand and ear; and the granular condition may even be felt when the abdominal wall is very thin.

But if the fluid be mixed with pus or with old grumous blood, then probably acute peritonitis will come and rapidly supervening death.

The case before us illustrates another danger, that of septicæmia. It occurred in connection with a vast peritoneal abscess in this case; but septicæmia may be caused in another way. If the cyst burst into the bowel, generally relief follows; but occasionally, from regurgitation and extravasation of feculent matters into the cyst, chronic septicæmia is set up, the woman dying very slowly. I know of cases, well recorded, where women have lived for years after an accident of such a kind, where at least gases from the bowel entered the cyst. I have never myself seen such a long survival; but ordinary air is frequently admitted by misadventure into cysts during tapping, without any harm accruing.

The results of burst cyst depend greatly on the character of the fluid effused. If it be pure blood it will not necessarily excite acute general peritonitis; if it be thin and bland ovarian fluid it will do little harm. It is alleged that, if it be very thick and viscid, it will cause acute peritonitis; but from several examples, verified by post-mortem examination or observed during ovariotomy, I can say this is, at least often, not the case. If, however, the fluid be pus or grumous blood, or contain them, for a certainty acute peritonitis will arise, and speedy death follow unless ovariotomy be at once performed.

The escaped fluid generally passes freely among the bowels, but not always; for its progress may be restrained by old adhesions, as in our case; or it may be so viscid as not to become diffused in the abdominal cavity, but displace the bowels as if it were itself a tumour.

When the fluid is in the peritoneal cavity it may be easily diagnosable as free fluid, if it is in large quantity. Sometimes it would appear to become inspissated, the watery part only being absorbed. Viscid fluid, after extravasation into the peritoneal cavity, is often difficult of diagnosis as free fluid, for it may displace the bowels as a tumour does.

All I have said is on the supposition that the cyst bursts into the peritoneum. But not very rarely it ruptures into some of the mucous passages. Generally this is made plain by the escape of the ovarian fluid from the body, and by the diminution of the size of the cyst, but it may occur so insidiously as not to be discovered by the physician. Such ruptures into the bowel have never been healed, so far as I know. I have known and put on record a case of burst cyst, where the fluid was discharged per vaginam, and where, long afterwards, on ovariotomy being performed, no adhesion of the cystoma to the pelvic organs was discovered. The rupture must have healed. The same healing occurs in many cases of a cyst bursting into the peritoneum, the cyst refilling and again bursting, sometimes repeatedly. But occasionally the aperture in the cyst remains widely open, as is sometimes finely seen, when the fluid is viscid, and distends the opening in the cyst when it is exposed to view, in ovariotomy or in a post-mortem examination.

Ovarian fluid may be quickly absorbed from the peritoneal cavity, and sometimes seems to be discharged from the system, by the kidneys or by the cutaneous surface. It is doubtful whether the peritoneum can absorb the very viscid fluids. Certainly in some cases viscid fluid lies in the abdomen for months or years, apparently accumulating slowly rather than disappearing by absorption.

The practical importance of rupture of an ovarian cystoma is very great. Bleeding into a cyst, no longer restrained by the resistance of the cyst-wall, may go on into the

peritoneum to prove rapidly fatal. The escape of irritating fluids from a cyst may induce diffuse peritonitis, or, as in our case, extensive peritoneal abscess. Further, sapræmia or septicæmia may be produced by intra-peritoneal putrefaction, as is also exemplified in the case before us.

Diagnosis may be difficult if not impossible, especially if the history of the case be not fully known. With a full history the diagnosis will probably be easy, for then the fluid, lying free in the abdomen, will not be likely to be mistaken for ascitic fluid or for a collection of fluid in a case of chronic peritonitis, as otherwise it might well be.

You know that, in all operations, you are advised to go over the diagnosis once more just before you begin. In none is the value of this more frequently exemplified than in ovariotomy and ovarian tapping. I have been on the point of tapping a large ovarian cyst, when I discovered that it had ruptured, that there was no distended cyst, but an abdomen filled with the escaped fluid (which was subsequently rapidly absorbed). I have seen a case in which ovariotomy was just about to be done, in which it was unexpectedly found that the cyst was tympanitic, a large communication (as the autopsy too soon showed) having formed between the chief cyst and the great intestine at its sigmoid flexure.

Rupture of ovarian cystoma does not always prevent ovariotomy. Sometimes, indeed, as I have already said, it demands immediate interference. Sometimes it only leads to delay of the operation, as was the case in the instance of intended tapping which I have just noticed; and as in a case of bursting and evacuation of fluid through the vagina which I have also mentioned in this lecture. Sometimes this bursting, when it takes place into the bowel, prevents ovariotomy altogether; at least I know no case in which ovariotomy has been successfully done or even deliberately attempted when a communication between bowel and cyst

existed. This complication presents difficulties which the great ingenuity of our operators has not yet vanquished.

Finally, rupture of ovarian cystoma is an accident, the risk of which must be considered in deciding the very important question,—When should ovariotomy be done? Few of you may ever become ovariotomists, but probably all of you will be called to assist in the decision of this important question, and you must not neglect this element—When?—in arriving at a conclusion. Some ovariotomists prefer operating on young, robust, women, at a comparatively early period of the disease, before the cyst gets very large. Other ovariotomists prefer operating on women when the cyst is comparatively old and large, and when their health, if not positively injured, is at least in a very degraded condition: when they are wasted and oppressed with the disease. The question is a very difficult one; to be decided by experience and according to the merits of each individual case. It is a question into which considerations of humanity as well as of surgery enter largely. You must not look upon your patients as mere cases. The mere case is only a part, an exclusively surgical part, of the whole. You must advise your patient, remembering, if not strictly obeying in every case, the grand precept to do to others as you would be done by. Now a consideration of humanity does, I know, powerfully affect ovariotomists. They are unwilling to subject a woman who may live happily for a year or even years to the risk of death within a few days from ovariotomy; while in the case of a woman exhausted by the disease, whose life is not worth many days' or weeks' purchase, they have no such scruple. In the final decision of this important question of when to perform ovariotomy, the danger of rupture of ovarian cystoma must have a weighty part. Had we had means and opportunity of foreseeing the accident which happened to our immediate patient, we should not have hesitated to recommend early interference by excision of the tumour.

LECTURE XXXIII.

ON MINOR DISPLACEMENTS.

No subject has of late years occupied more of the attention of gynæcologists than that of minor displacements; and I wish to give you, in this lecture, some general views regarding them, since in your future practice you will often have to consider them; and some guidance is needful, for, the matter being difficult, of course opinions vary extremely.

Occasionally you see a case of retroversion or of retroflexion of the gravid uterus, a most important great displacement, cured by replacement; but the subject of this lecture has very little in common with that great disease. The minor displacements now to be considered are frequent enough in "Martha," but they rarely get written on the register as the name of the patient's disease, for you know I regard them as important conditions of other diseases, not as in themselves diseases. A retroverted, or retroflected, or anteverted, or anteflected, or a laterally displaced, womb is not therefore a diseased womb—does not cause any pain or disorder or disability; nor does the first degree of descent.

You will not be able to comprehend the difficulties of this matter, nor to appreciate it justly, unless you include in your judgment the influence of enthusiasm on the doctor, and of enthusiasm and hysteria on the patient; and these are subjects on which, unfortunately, I cannot enter. The doctor and patient are so delighted with the simplicity and intelligibility of the supposed disease, and so impressed by

them, that they are with difficulty made content while the displacement continues, even although pains and aches and every known evil are gone.

I dismiss without discussion those extreme views which, though prevalent, are not the less untenable and highly injurious. In a former lecture, on indirect symptoms, I gave you some idea of those views, enumerating the evils attributed to even slight displacement of the womb—the womb "a little to the left," as I was told by a physician lately, in a case treated by years on the sofa and pessaries. Were such doctrines well founded, life for woman would not be worth having, for the position of no womb satisfies those who entertain them, and treatment has, as its ordinary consequence, failure and disappointment, and sometimes grave disaster.

Although of late years this subject has put on a new phase, that of treatment, and especially by ingenious and peculiar pessaries, it is not novel. Long before the present generation of doctors, minor displacements were well known and more correctly estimated than they are now. A high British authority of an early part of this century points out that the "ante" or the "retro" are of little import compared with the descent; and I go further in the same direction.

A womb may be more or less rigid, and will keep its shape against distorting or flexing forces if its rigidity is sufficient; and, in that case, it will become displaced in mass, with shape nearly unchanged, or in the words of the science, be verted, not flexed or distorted. Congenital distortions or flexions we are not considering, but only those cases where the change in the womb is believed to be acquired, and in these a distorting or flexing force is also a displacing force. An acquired distortion or flexion is also a displacement, and in the matter under consideration the displacement is always descent in some degree.

Version and flexion are very useful terms, and you find

me frequently using them, and thus recommending them to you; but I should like you when studying a case to keep in mind that all displacements are forms of descent, and that it is not only a bit of the womb or the womb alone that descends, but the whole abdominal contents as well, or, at least, the contents and part of the soft tissues of the pelvis. The descent, so far as it affects the womb, may move one part more than another, and then you have a flexion; or it may move the whole, and then you have a version or descent. A pliable womb may have more than one flexion, thus showing, on section, a sinuous line of cavity, but generally there is only one. The bend may be in any possible degree, and the walls are so thick that any possible degree does not interfere materially with the easy permeability of the uterine canal or passage. It is common to teach that the bend or flexion takes place always at the level of the internal os; but this is an error. For, while, at this point, anteflexion and retroflexion are frequent, it is often impossible to say where it is, the whole womb being uniformly or nearly uniformly curved; and it is not rare to have flexion in the body, that is, above the internal os, or in the cervix, that is, below the internal os. Of these facts I have often given you clinical evidence.

Circumstances, difficult to appreciate actually, determine in each individual case the direction of the descent, whether it be an anteflexion or retroflexion, and anteversion or retroversion, or a descent without flexion or version. Although this actual determination is not to be made, we may boldly assert that it is, in the main, a mechanical affair of forces, of which the result is what we diagnose.

The analogy of hernia helps more to comprehend displacements than any other, and especially to grasp the causes and effects; and we may adapt old-fashioned language to the present case, and describe causes as exciting and predisposing. The former are the real causes; the

latter are favouring circumstances which are in no sense real causes. Increased weight of the womb may be an exciting cause, so may a well-adapted fall or jump, or such sudden downward shock; but greater than these is prolonged downward pressure, as in certain kinds of hard work; and in all cases you have a diminished retentive abdominal power, or a positive condition of intra-abdominal pressure. With a natural condition of the retentive power (as in ordinary pregnancy) there will be no danger from increased weight of the womb; dislocation produced by a fall or shock will be repaired immediately, and the hardest work may be carried on without injury. With an indifferent state of intra-abdominal pressure, permanent harm may result from these causes. But, without any other cause, a positive intra-abdominal pressure is sure to produce hernia somewhere; and in women it will probably take the form of some kind or degree of descent of the womb. Predisposing causes include everything which tends to aggravate or increase the cause, and everything which diminishes the resistance, such as relaxation of tissues or destruction of parts subjacent to the womb.

It is, I believe, universally admitted that versions, flexions, and descent are not necessarily the cause of any discomfort or disorder, and this is a cardinal fact in this question. Think of it. Thousands of blooming, happy, fertile women have displacements. To treat a displacement, simply because it exists, is a grave error, and yet not a rare one. Such simple uncomplicated displacement is not disease. It is the condition of equilibrium of that woman's pelvic viscera, and therefore the displacement is a constituent part of her comfort and health. I may confirm what I have said by reminding you that a woman may have her womb not only displaced, but also monstrously misshapen or distorted by a fibroid or fibroids, and yet have not a pain or an ache or any discoverable disorder. In fact, it would be hard to say what shape and what position of the womb are unnatural, not to say morbid;

certainly its shape and position have a very wide range within the limits of the natural or not abnormal.

There is a vast number of cases of chronic disordered health in women, of most varied kinds, which are associated with displacement and descent, and it is very common in the present day to regard the displacement as an important, or as the chief factor, in these cases, even when there are no local or direct symptoms whatever. Now, here my respect for my professional brethren forbids my speaking dogmatically, yet I do not hesitate to recommend you not to adopt this view. Very long experience of my own practice and of the practice of others leads me to regard the displacement in such cases as trivial, not demanding treatment. You may have the displacement without the symptoms, and the symptoms without the displacement; and till we have some evidence, better than we have now, that the symptoms depend on the displacement, I advise you to leave the displacement alone. You cannot successfully treat it, and, if you did, your patient is not nearer to restored health.

Again, there is a large number of cases of chronic disordered health, of most varied kinds, associated with displacement and descent, and with local or direct symptoms of uterine, or at least of pelvic, disorder. In these it is always important, if you can, to remove the disorder, whatever it may be, and the symptoms too.

Lastly, there are many cases where the local symptoms and the local disorder are alone or predominate.

The symptoms of displacement and descent cannot be definitely described. They are often classed as the general symptoms of uterine ailment. Sacrache, lower lumbar ache, aching in the hips, or in the groins, or in the thighs—all aggravated by walking, and still more by standing. To these are to be added feelings of bearing-down, bladder trouble, and rectal trouble. All of these, and more, or none at all, may be present. There is no relation between the

degree of displacement and the severity of the symptoms. They are, in fact, associated with the displacement, and, it may be, aggravated by it; but I do not think they are ever the result of the displacement, pure and simple.

At the bedside, however, we have a great number of cases presenting symptoms of uterine ailment, in which displacement has an important place or share, and must be considered. An experienced practitioner cannot fail to see the advantages of a high and well-poised womb, the disadvantages of the descended and displaced organ. And a great practical test of the influence of the displacement is the aggravation by walking, and still more by standing, and the relief, generally almost complete, obtained by lying down. This last is of itself very nearly diagnostic.

If a woman has a uterus or any organ or tissue in her pelvis tender or inflamed, it is pressed and irritated by the general displacement and descent; and standing, as is easily understood, makes the matter worse, while all is mitigated by horizontal repose. I have heard and read a great deal of anteversion and anteflexion being specially connected with or causing bladder trouble, and of retroversion and retroflexion being specially connected with rectal trouble, but I regard the connection or association in both cases as quite accidental—not to be expected. It is, indeed, in a rude way, natural to expect this result, but clinical experience has not demonstrated it; nor is there any satisfaction or rationality in the common explanation founded on pressure —forwards in the one case, or backwards in the other. If there is no complication by adhesions or otherwise, pressure forwards and pressure backwards are just the same—equal and contrary.

Complications, then, are generally the chief matter in displacements, not the displacements *per se;* and the complications are generally congestion and inflammation of the womb or of parts of it, or of neighbouring organs.

I must now conclude this too brief lecture, again reminding you that it is only some general notions that I have been able to give you. The subject has many mysteries which I cannot explain. To guide you in cases of this kind you need wisdom over and above, but not without, science and experience.

LECTURE XXXIV.

ON PESSARIES IN MINOR DISPLACEMENTS.

My lecture to-day is on the use of pessaries in minor displacements—general views, not particular statements. On the treatment of the great procidentia I shall speak another day.

My feeling of difficulty and embarrassment I am sure ardent student-youth cannot appreciate. They do not see and feel the mist around the subject as they will do when they come into practice; and, attempting to guide you, I feel that I do not myself know the straight scientific road to the clean and sweet drops of truth I should like to present to you. Consequently I shall deal much in negatives—Not this way or that is the right one.

Now, in the present great abundance of contorted bits of wood, and metal, and vulcanite, and what not, called pessaries, my advice to you is Punch's advice to a young man contemplating marriage—Don't! Think twice before beginning the often baneful practice of using any instrument, teaching a woman to depend on what, if not positively useful, is positively injurious, though perhaps not much so. Many a woman has suffered from, and many a woman has died of, a pessary; but most pessaries, as I find them in use, are nearly innocuous for evil or for good. They are always harbourers of dirt, and they always keep the mind watching the part; they are all liable to decay, and require, if long used, to be renewed. They all are undesirable additions to

the contents of the pelvic excavation, and if they are efficient, must, of course, cause more pressure than that caused by the organ or organs which they keep in altered position, though perhaps on different parts.

Pessaries are used for the purpose of keeping up replacement or descended or otherwise displaced organs, or of displacing the organs and keeping them displaced, or of fixing or nearly fixing them against the results of succussion or shaking; and all these come into the one category of mechanical objects. But you sometimes see what are called galvanic pessaries, whose object is to act otherwise than mechanically, giving a homœopathic dose of galvanism. These galvanic pessaries are used in amenorrhœa and in virgins; and to all this kind of meddling there are strong objections, medical and moral. Till you know something more precise in its favour than the vulgar talk of "cures" you should have nothing to do with it. Look upon pessaries as a surgeon looks on a truss, not medicinal otherwise than as a mechanical means of procuring healing, comfort, and safety to your patient.

Speaking of virgins, I may say that there is very rarely occasion to examine such for displacement, and that, when examination is made, it can generally be done quite satisfactorily per rectum. You get the knowledge of the condition of the pelvic viscera that you want, and that is all you should require. If you find only a minor displacement you had better let it alone, not even trying a pessary. It is only in very rare complicated cases with distinct mechanical indications that a pessary should be tried or used. I do not remember myself using one on any ground whatever in a virgin, for a minor displacement.

Intra-uterine or stem pessaries are the only instruments you can rely on for straightening the uterus, or keeping a flexion undone. They do this as a male bougie straightens the urethra. Some kinds have an outside or pubic part by

which the straightened uterus is fixed; but the oldest and the most recent kind respect the mobility of the uterus. They have been three times introduced into practice within this century, but the practice has never flourished. Many modifications have been ingeniously devised with a view to perfect them, but in vain. I do not expect they will ever find occupation in the conditions now under discussion. They are far more injurious and dangerous than the conditions they are intended to modify. There is no such instrument in "Martha."

The evils of intra-uterine pessaries have led to great ingenuity in attempts to undo flexions and keep them undone by vaginal, not intra-uterine, instruments. This attempt is often successful in retroflexion which does not occur as a congenital rigidly fixed condition, and can be dealt with just as a retroversion is managed. But the curious things are anteflexion pessaries; and in regard to their giving relief I meantime express no opinion; but I do say that if they give relief it is not by undoing the flexion and keeping it undone, keeping the womb straight. I have seen most kinds of anteflexion pessaries as placed by their inventors, and too often replaced and replaced, but I have never seen one materially modify the flexion. I have myself never used one, and have no intention of doing so. There is another bad and too common practice which I must not omit to mention here, that is, what is called straightening or putting up the womb, or replacing it time after time by the probe or finger. This has no other effect than to irritate the organ, for the displacement recurs immediately after the probe or finger is removed, as the practice itself shows.

It is not a simple matter to judge of the part taken by a pessary in relieving or removing painful symptoms. A kindly doctor makes an amiable patient anxious to please him and ready to express a sense of relief which may not be real. Besides, you will find many patients alarmed at

the idea of having a displacement, and, believing the pessary undoes it or cures it, wear an instrument with satisfaction and even pleasure, although it gives them new pains or increases what they had before. Such patients live in the pleasing and sustaining delusion that the pessary is curing them, and object to its removal even when removal gives relief, and although told that the pessary, when in, does not alter the condition of displacement. In such difficulties how are you to be guided? The difficulty is almost insuperable if your patient has become possessed by erroneous notions of the importance of displacements; and you must take care to prevent the adoption of such notions.

You must guide your patient's mind aright, and take care of the displacement, acting on two principles—first, not to allow harm to come through your treatment; and second, that practice overrules all theories in the present imperfect state of our knowledge; that is, if your patient gets real relief from any kind of pessary that does not do important harm, let her have that relief.

This leads me to enter more carefully on the question—What do you expect from a pessary?

You may replace a descended or retroflexed or retroverted uterus, and keep it replaced by a pessary, and you may so relieve or remove pains. You cannot cure a displacement, though sometimes you can substitute one displacement for another, that is, for example, change a retroversion into an anteversion. No doubt a displacement may sometimes be, in a sense, cured—as when an adhesive perimetritis ends in tying a uterus up to the higher part of the sacrum. But all kinds of minor displacements are incurable by any kind of instrumental treatment. Remove the instrument, and the displacement is just as it was before, or there is a new alternative one, and this, however long the instrument may have been in place.

Displacements sometimes disappear, or are cured spon-

taneously or by aid of proper treatment. Thus a woman with chronic inflammation of the cervix, and probably also relaxation of the vagina, gets rid of these conditions, and then the uterus ascends from its descended and perhaps flexed position. A woman with a bulky uterus, perhaps containing a small fibroid, becomes aged; the uterus becomes lighter and lighter, and the upper part of the vagina contracts, and the descended uterus ascends. Any change in the constitution of the abdomen which increases its retentive power will raise the uterus higher, destroying displacement, and such changes in the abdomen may result from enlargement of the base of the thorax, or from changes in the quantity and disposition of fat.

I have already said that a pessary often cures by its effect on the mind. A patient recently said to me, "You have quite cured me. I can walk now, but not without that pessary." And she was not altogether pleased when I told her she had no pessary—that I had removed it months previously without her being aware of my having done so. I had omitted to tell her. Had she known she had no pessary she would have found pains arise from walking, and all this without any desire to be untrue.

A pessary often gives relief, even when small, and having no discoverable function, doing nothing. Of the occasional occurrence of such cases I do not doubt, and I am quite unable to explain them. It is of such cases I was thinking when I told you that practical success must overrule theory, or take the place of a failure in theory.

It is quite common to find a pessary give relief in what may be called a flexion, because that feature of the case is most striking, without the pessary changing the flexion. In such cases the pessary may maintain a diminished degree of descent, and may prevent increase of descent on walking, and may save a tender part of the uterus from pressure on sitting. There is no difficulty in explaining such cases; but to comprehend the action of the pessary you should think

of the case as one of descent—not of flexion; and this is true of almost all—if not all—cases of flexion.

As a matter of fact, I find the majority of versions and flexions, as observed in practice and treated by pessaries, have their whole conditions of displacement quite unaltered by the pessary, even while in.

One of the best examples of relief by a pessary is observed in the anteversion (by probe) of an engorged retroverted and descended uterus. Here a well-fitted Hodge is comforting and curative, maintaining the anteversion, elevating the uterus or preventing descent on walking or standing, and preventing relapse into retroversion or retroflexion by keeping the posterior laquear of the vagina pressed against the sacrum.

Another notable example of relief is seen in descent with tendency to cystocele, when the irritation of the cystocele pushing at the orifice of the vagina is most annoying. In such, a suitable sized Hodge, or india-rubber ring, often, by its anterior limb, just catches the cystocele and obviates the tendency to protrusion through the os vaginæ.

For each case your pessary must be specially adapted—a ring, a boat-shaped, or a double-curved—and it must fit the patient in size and contour. Nothing can instruct you in this but bedside experience. Occasionally you have to try more pessaries than one to find the most suitable. Sometimes a woman, whose case you expected to relieve by a pessary, can bear none of whatever kind.

A pessary, if it is to be useful, will give relief at once, and will need very little attention from you. If you are frequently fitting and re-adapting, you are almost surely doing more harm than good. A well-fitted pessary may be worn for months without being attended to. You must take care that the pessary does not cause ulceration and cut the vagina, and you must have a new one placed when the former one gets decayed.

You will find it hard to get any good from a pessary unless you have a fair amount of perineum to support it. A pessary will be inefficient if the vagina is not long enough and capacious enough to allow of its action without strong pressure on any special limited part of the vaginal wall.

In flexion or version, without descent of the whole organ, you can do no good to the version or flexion by a pessary: you have no basis or fulcrum to work from.

LECTURE XXXV.

ON PROCIDENTIA UTERI.

THE subject of this lecture is one of the most important among the diseases of women—Procidentia of the Uterus. It is of the simplest kind, almost purely mechanical, quite as much so as a dislocation of the shoulder, or a hernia. There are a variety of other views held which may be called vital, connecting it with some diseased condition as a cause, but I am satisfied that it is mainly mechanical. In the descent of the uterus there is a variety of degrees. The first is generally called descent; it is the slightest degree. The second is prolapsus, in which the neck of the womb is near the orifice of the vagina. The example before us is, however, one of the most important degree, procidentia, a falling forth from the body.

When the patient came to us the womb was not procident, it was merely in a condition of prolapse, lying on the perineum, not outside the woman's body. But if she walked about or made any effort, it came outside; therefore it is classed among the cases of procidentia of the womb.

Now, what makes a woman's womb fall out of her body? To investigate this, we must inquire what keeps it in its place. The most important cause is the pressure relations of the abdomen. The womb floats. Suppose in the corpse of a healthy female you open the abdomen, the womb is then always found in a state of descent, because the destruction of the entirety of the abdomen robs it of its

support. Before the abdomen was opened the uterus was in its normal position, the fundus about on a level with the brim of the pelvis.

If I were to ask a first year's student what keeps the womb in position, he would at once answer—the ligaments. The idea is, however, quite an erroneous one; the term *ligaments*, as applied to the utero-sacral, the utero-vesical, the round and the broad ligaments, is a most unfortunate one. They are not ligaments at all. If they were they would prevent the womb from moving, whereas their function is to give it unlimited motion. They stretch and give to any extent, if a due amount of time is allowed.

The next force which is said to keep the uterus in place is the perineum, and the state of this is a very important matter in the case of procidentia. In a healthy woman the labia are separated only by a line, and between their junction posteriorly and the anus is a considerable space, the perineum proper. In procidentia it is quite different; instead of the labia majora meeting one another, there is a great gaping orifice, into which you might put your fist; through this the womb is easily protruded.

It is generally and erroneously stated that rupture of the perineum during childbirth is a great cause of procidentia. There is a wide difference between causing and facilitating an event. If you were to take a healthy woman and put a knife in at her anus, and cutting on, bring it out at the fourchette, the womb would not alter its position. How do we know this? Because Nature has demonstrated it by experiment. I have seen many cases where even the recto-vaginal septum was torn through, and there has not in any of them occurred a prolapsus of the womb. Therefore rupture of the perineum has nothing whatever to do with causing procidentia. But it has to do with facilitating it. The birth of a child over the perineum may be compared to the birth of the womb over the perineum. In

childbirth the first thing that occasions waiting is the opening of the mouth of the womb; the next is the distension of the rigid perineum. Take, however, a woman who is not only a multipara, but whose perineum has been lacerated; as soon as the head of the child gets through the os uteri, there is nothing to stop it. So it is with the womb when it reaches a state of prolapsus; the perineum having been torn there is nothing to stop it, it is outside at once.

Procidentia is therefore more likely to occur in a woman who has borne children than in a nulliparous woman; but even a virgin may suffer from it, and I have seen it before menstruation had commenced. Of the peculiarities of this procidentia in early life I have no time to speak to-day.

In the case before us we had to consider the state of the perineum. It did not show much laceration. But on examining the parts I had occasion to comment upon a statement of the woman. She asserted herself to be a virgin, and yet I am satisfied that she has had at least one large child. I had no discussion with her, for whatever she might say would not alter my opinion. And these are the reasons for my decision: First, I found in her abdomen, above Poupart's ligament, on either side, riband-like cracks in the skin. These are seldom produced in that part by anything but pregnancy, and must not be confused with the silvery lines often seen, and which own the same cause. This was sufficient to arouse suspicion. But there was another and more important sign. In a virgin, the orifice of the vagina should be partially closed by the hymen. When a woman has sexual intercourse the hymen is not destroyed; it is only lacerated in one or more places; and even in a woman who has had an abortion, the segments of the hymen are still manifest. But after a child at full term the hymen is very much injured; a few bits may remain, but rarely more. In this woman there was no hymen at all, so we may

fairly infer that she has given birth to a child of considerable size.

So much for the causation of procidentia; a few words as to the anatomy. I shall only, to-day, give it so far as it is illustrated in the case before us.

And the first point to notice is this—that the disease is called procidentia of the womb, and if you allow the name to guide you as to its anatomy, you will form a most erroneous idea of the disease. In such a disease as that we are discussing there is procidentia of the womb, vagina, bladder, part of the rectum, of the ovaries, of the bowels, of the liver; and probably everything falls down—indeed, as the case of this woman illustrates, the womb is generally the organ that notably refuses to go down, and the disease might be called procidentia of any organ as truly as of the womb, or indeed more truly.

The common idea is that the whole womb protrudes beyond the vulva. This is, however, not often the case; generally there is tensile elongation of the neck of the womb, the fundus remaining within the pelvis. The uterine probe passes in five inches instead of two and a half, as in the case we have under consideration. The organ, therefore, that chiefly refuses to descend is the womb, and yet it gives the name to the disease. It is of great importance for you to know the ordinary anatomy of this disease. Almost invariably the bladder comes down. It is so closely connected to the uterus that, as the neck descends, it pulls the bladder down with it. The bladder will be found in front of the anterior cervical lip—not invariably so, but I have never seen a case without it. The vagina is inverted. As regards the rectum, it is seldom found down; sometimes a little pouch is formed in it anteriorly, which is of extreme importance in connection with difficulty of defæcation. In this woman there was no descent of the rectum.

To the patient the symptoms are most important, and

they form a matter to be very carefully considered in connection with doctrines now entertained regarding displacements of the womb. I have no intention here of expressing any opinion regarding uterine displacement doctrines generally, except that procidentia has a most important bearing on these doctrines, which say that the slightest change of position, a little curve, gives rise to the gravest symptoms. Now procidentia is a displacement of the most extreme kind, and what symptoms does it produce? Frequently none at all. The uterus of the woman of whom I am speaking was not only procident, but it was acutely retroflected. Here was a displacement of the most aggravated kind, and yet the patient complained hardly at all of pain; her trouble was that the womb fell outside when she walked; it was the mechanical inconvenience which disgusted her. One has only to look at the woman, to see that she is in blooming health. Most women, however, do suffer greatly from dragging pains in the groins, hips, and thighs, and from difficulties in urinating and defæcating.

If the disease be mechanical, so must the treatment be mechanical. You would not treat a dislocation of the shoulder by administering medicines.

The case before us was not one of an aggravated kind. When the woman was lying down the disease was cured. The pressure relations of the abdomen became at once changed. If we knew—some day we may—some method of influencing these pressure relations of the abdomen, we might cure this disease by such means. If fat occur in the anterior wall of the abdomen and not in the omentum, the womb is generally found high up. We do not know yet how to produce fat in this situation, so we must resort to simpler methods.

One of these is a pessary. Certain shapes take fixed points on the walls of the vagina and pelvis, and by their aid form a shelf on which the womb rests, and cannot

get beyond. Among such is the disc and stem pessary, and the Zwanck instrument.

Another method, and one especially applicable to women unmarried, or after the child-bearing period, is to nearly close the orifice through which the womb comes out, not strictly to restore the perineum, for it may be anatomically entire, but what is termed episioraphy. When the operation is finished, the mouth of the vagina is contracted, and there is no great gaping orifice. So long as it keeps like this, the womb cannot come out. And this operation cures a great many cases.

I may mention the case of a nurse in the Royal Infirmary of Edinburgh. I need hardly say that few occupations could be worse for procidentia than that of a hospital nurse. The operation of episioraphy was performed upon her, she was cured, and she retained her situation for some years; she then married a second time, and had two children. The child-bearing destroyed all the renewed perineum; the womb came down again. She once more became a widow; I operated again, and she is at the present time a nurse in the Royal Infirmary, and has been so for many years without any procidentia whatever.

A third method is the T bandage with perineal pad, which is very valuable in a case of this kind as an adjuvant. Suppose that the door behind me is open, and I stand in the doorway. I cannot prevent you from crowding out; you will push by me on one side or the other. So it is with the gaping orifice of the vagina, the T bandage will not prevent the womb from forcing its way out on one or other side of it. Episioraphy is equivalent to shutting the door. Then the T bandage acts like the hand placed against the other side of the door, it exerts a force which counteracts the pressure from within, and forbids passage to anything. The air-pad of the vertical limb of the bandage presses the perineum against the lower border of the symphysis, and

obstructs the passage of the falling parts to the vaginal orifice. For some days the pad causes pain and irritation; and few women have courage and perseverance to use the T bandage, so as to be effective. In most cases it is merely comforting mentally, doing no mechanical good, but giving a feeling of security.

Difficulty in curing, or keeping replaced, varies with variations of one condition, namely, the amount of downward pressure of the displaced parts that has to be overcome.

APPENDICES.

XXXVI.

ON OPEN FALLOPIAN TUBE AND CERVIX UTERI.

The uterine end of the tube is regarded almost exclusively as a closed or a merely potential tube or canal. It is spoken of as large enough to permit a bristle to be pushed through it; but this is done with difficulty, and, for practical purposes, it is no doubt generally closed, for fluids accumulate in the uterine cavity under great pressure; and the use of intra-uterine injections, whether after delivery or at other times, is feasible, because the injected fluids, as a rule, do not find an open passage in the tubes. The closure of the tube is not by such apposition of its walls as is seen when a piece of gut is pressed flat between two parallel surfaces, but is stricture-like, or such as is produced by an active sphincter.

The cervix uteri has a canal, which is generally neither closed, nor a merely potential tube, there being an easily appreciable quantity of mucus, even in its external and in its internal os. If it be a merely potential canal, its closure is by apposition of its anterior and posterior walls; and a large probe—the ordinary uterine probe or sound—can be passed easily through it. Fluids do not accumulate in the uterine cavity because of want of opportunity of exit, if the cervix be in its ordinary condition. Indeed, although it is often asserted

that such closure of the cervix as arises from smallness of either of its two terminal openings, or from flexion, leads to distension of the uterine cavities by accumulation of retained secretions or excretions, there is no evidence to this effect; while examples of these cervical conditions without retention are very frequently observed.

The canalization of the cervix, or rather its further canalization, or increased canalization, is different from the canalization of a tube which begins by having no available canal or passage at all.

The opening of the os uteri, at either end of the cervix, so as, with the intervening passage, to form a cylindrical tube of considerable diameter—say that of No. 9—is easily effected by bougie in the healthy female; and its further rapid dilatation, so as to permit the passage of the finger, may also be effected. The canalization of the cervix in labour is well known, and to a great extent understood.

The dilatation or canalization of the cervix has often been described as occurring in sexual excitement; and Rouget has described a supposed mechanism of its production.* It has also been described by Beck† as seen in progress through the speculum; and I have observed, in the same way, the external os uteri forming a rounded or wide opening, which would admit a No. 12, in a woman who had never been pregnant, and whose external os was, a short time previously, in the ordinary virgin state. The improvement of the canalization of the cervix is the chief object of most of the methods of mechanically treating sterility.‡

Apart from pregnancy, the otherwise healthy cervix becomes spontaneously canalized in certain hæmorrhages which I shall describe in future chapters.

* *Researches in Obstetrics.* By the Author, p. 431.

† *American Journal of Obstetrics*, November, 1874.

‡ For further references, see Pallen, *American Journal of Obstetrics*, 1880. "On a case of Abdominal Pregnancy."

The canalization of a tube is provided for by its anatomical structure, and it must take place spontaneously, regularly, and naturally, in order to transmit the fecundated ovum; but little is known of its occasional occurrence as a condition morbid in itself, or leading to morbid results. The occurrence of dilatation or spontaneous canalization was long ignored, as may be seen by reference to the literature of hæmatocele.* Indeed, long after its description, attempts were made to explain away the evidence on which its occurrence was asserted.

No one, so far as I know, now denies the occurrence of patent Fallopian tube, for it is frequently observed in practice, the probe passing through it in making uterine investigations. It has also been frequently seen in dissections, and of this I recently had an example. Investigating the pelvic conditions of a case, destined, by a colleague, for ovariotomy, I found the uterine probe pass to the right side of the pelvis, and far beyond the limits of the uterine body, which was pretty easily and certainly felt. When the woman was on the operating table, I failed to pass the probe again through the tube, probably from the unfavourable circumstances under which the attempt was made. A few days subsequently, on the post-mortem examination, the right tube was observed lying in the route which the probe had taken, and its uterine extremity was patent, not to the extent of being big enough to transmit a uterine sound, with the ordinary bulbous point, but to transmit a common small surgical probe.

* *Edinburgh Med. Journal*, Nov., 1865, p. 409; also, *Ibid*, June, 1856, p. 1057 See also, Hœning, *Berl. Klin. Wochenschr.*, No. 16, April, 1870; Hildebrandt, *Monatsschr. f. Geb. und Frauenkr.* Band. xxxi. S. 447; Biedert, *Berl. Klin. Wochenschr.*, Oct., 1877, and *Medical Record*, January 15, 1878; Bischoff, *Correspondenzblatt für Schweizer Aerzte*, Oct. 1, 1872; Hennig, *Katarrh der inn. weibl. Geschlechtstheile*, ii. Ausgabe., S. 3, 12, 145; Tait, *Lancet*, Oct. 19, 1872; Klemm, *Monatsschr. für Geb.*, Band. xxii. S. 478; Elischer, *Deutsche Med. Wochenschr.*, April 15, 1876, &c., &c.

Interesting evidence of the patency of the tubes is found in the intra-uterine clots sometimes discharged in cases of metrorrhagia. These, coming away as models of the uterine cavity, bear at their upper angles long clots drawn out of the tubes, and found hanging from the main intra-uterine clot. Appendages of the same appearance and origin may be found attached to the decidua in cases of abortion;* but these are decidual in structure, and have some strength, and are not extracted from the tube, but are part of the tube. They do not indicate patency; but the extraction of a long clot, so delicate and perishable as it is, attached only by the feeble cohesion of coagulation to the main intra-uterine clot, indicates a decided patency of the canal from which it passed. In Pirie's case† "the upper part of the clot was firm, even somewhat tough, and the tubal cords were nearly four inches long." In the case of C. Rokitansky the body of the uterus contained "a three-cornered coagulum, ending above on both sides in a short thin thread running to the tubes." Whitehead says that, in his case, "small fibrous prolongations from the clot corresponded to the Fallopian tubes."

Of the probable evil results of persistent patency of the Fallopian tube, the following is an example related to me by Mr. Hewer, as having occurred in the practice of his partner, Mr. Calthrop. A widow, aged forty-eight, had a polypus of the cervix snipped off by scissors. On the fifth day after the operation, her sister gave her, gently, a vaginal injection of warm water with Condy's fluid. Whilst receiving the injection, the patient cried out, "You have killed me," and was seized with sudden pain in the right side of the abdomen. She lived for three days, in great pain, till within a few hours of her death. On post-mortem examination

* *Researches in Obstetrics.* By the Author, p. 296.

† *Obstetrical Journal*, January, 1880, p. 5, and a subsequent chapter of this book.

there was found general peritonitis, with flaky lymph on the intestines. The right Fallopian tube was seen to be much longer than the left and twice as broad; it was also freely patulous. The section of the pedicle of the polypus was healthy. There were two other polypi in the cervix. Here, as Mr. Hewer says, it was plain that the injected fluid passed into the peritoneal cavity through a canalized tube, and caused peritonitis and death. Of this accident, many cases are now on record, the injection being either vaginal as in Hewer's case, or intra-uterine.

By the same route I have long held that blood frequently passes from the uterine cavity into the peritoneal cavity, and gives rise to hæmatocele. Indeed, I incline to the opinion that this diversion of blood, whether menstrual, menorrhagic, or metrorrhagic, is the most frequent cause of this not uncommon disease. Of course, it is necessary to suppose, what has been well accounted for, that the morbid course of the blood is mechanically easier than the natural or ordinary one through the cervix uteri into the vagina; and there can further be no doubt that, ordinarily, even when a tube is patent, the mechanically easier progress of the blood is through the cervix into the vagina. Were it not so, hæmatocele would be much more frequent than it is. I have known a woman lose blood from her uterus per vaginam, while a tube was freely patent, allowing the passage of a probe.

Besides the passage of blood, there is the almost certain, but very rare, passage of a lumbricus through a patent tube.* This kind of passage is effected by the movements of the animal.

Further, openness of a tube is a necessary condition for the accomplishment of the wandering of the ovum in certain cases of extra-uterine pregnancy.

In conclusion, it is necessary to remember that, besides natural and morbid conditions of patency, there may be

* Winckel, *Die Pathologie der weiblichen Sexualorgane*, S. 321.

unnatural absence of temporary patency, or of occasional dilatation of the tubes; for it is probable that they dilate during sexual excitement, and permit the passage of the semen. Indeed, it is scarcely conceivable that the semen can permeate the tubes while they are in their usual closed state. This absence of dilatability of the tubes, or their rigidity, may thus be a cause of barrenness.

The proposal of Tyler Smith to catheterize the tubes, and thus cure sterility, was brought forward under the influence of different theoretical views from those expressed in this chapter. It has, as yet, led to no more practical result than the proposal of Froriep to close them by cauterization, in order to produce sterility.

XXXVII.

ON SPONTANEOUS DILATATION OF THE VIRGIN UTERUS, WITH HÆMORRHAGE.

The word "spontaneous" is here used to imply absence of any well-ascertained cause or mechanism to account for the expansion of the cavities of the organ. Dilatation is here used to imply at least a greater increase of the cubical capacity of the uterus than could result from any change in the form of the healthy cavity.

Mere nervous inhibition is, of course, insufficient, but may have part in the causation. There is nothing attached to the uterus and growing in it, such as an ovum or a polypus. There is nothing inserted into the uterus and growing in it, such as a tent. It is difficult to imagine an explanation framed upon our knowledge of uterine polarity; or of the force of increased retentive abdominal power—in other words, of altered pressure relations. Rapid and active elongation of muscular fibres is a hypothesis which has been invoked by Pettigrew* to explain, to some extent, the cardiac diastole, and other similar phenomena; but, so far as I know, it remains a hypothesis without sufficient basis.

Cases of spontaneous dilatation with hæmorrhage, after parturition, are common, and become more and more rare as time elapses, counting from the birth at term, the miscarriage, or the abortion.

Dilatation of the unimpregnated organ, in connection with disease, and with or without hæmorrhage, is not rare. It is

* *Physiology of the Circulation*, p. 217.

seen in cases of endometritis, and I have published in the *Obstetrical Transactions of London* for 1879 a remarkable example connected with ulceration of the interior of the uterus, and not explained by the attachment to the fundus uteri of a fibroid which, at most, could have produced little expansion of the uterine cavity.

Laboratory experiments such as those of Glenard* on the dilatation of the puerperal uterus are greatly desiderated in this matter.

It readily occurs to the mind that a dilated state of the otherwise healthy unimpregnated uterus is not, at least hitherto, a matter of observation in the post-mortem theatre; and on this point I would make one reflection. The open state of the uterine end of a Fallopian tube has been seen in post-mortem examinations only a very few times, very much seldomer than would be expected, considering its frequent occurrence during life. The contracted and closed state of the bladder is not rarely seen in the post-mortem theatre, and is found in homalographic sections of frozen corpses; while during life it is a very rare condition.

My cases occurred in women whose uteri were otherwise healthy. They attracted attention through the copious hæmorrhage which was present in both of them, and it is to be particularly noticed that, in both, the cervix uteri was widely open and the uterus not displaced. In both there were observed only recent clots, without any trace of advanced decolorization.

Dr. Whitehead has published a case which is to be found in the *London Medical Gazette* for 1846, p. 549. The case was one of simple menorrhagia in a girl aged seventeen, which proved fatal. The clot found in it indicates, almost with certainty, dilatation of the whole uterus much above the natural dimensions of its cavities; for the clot was globose,

* *Archives de Tocologie*, Aout, 1876, p. 468. See also *British Medical Journal*, October 27, 1877, p. 584.

or of considerable thickness. The "clot, from its lower extremity, which terminated at the os tincæ, to the part situated at the fundus uteri, measured two inches and a quarter; and between its two horns, one inch and three quarters." To this description I can, through the kindness of Dr. Whitehead, add the following particulars:—The clot was globose on all sides, including that corresponding to the fundus uteri, and it had no ridge, or sulcus forming an edge. Its thickness was not specially measured, but was about one half inch. Small fibrinous prolongations from the clot corresponded to the Fallopian tubes.

My first case occurred several years ago in the Royal Infirmary of Edinburgh, and the circumstances of my removal to London prevent my giving fuller details of it than I now subjoin. I was called by Dr. Muirhead to see the sister of one of the medical wards, who was flooding. She was a pallid, black-haired lady, in whom the menopause was believed to be at hand. She was unmarried, and examination revealed virginal condition of the hymen. The flooding was copious, like that of an abortion, and it had lasted so long as to produce great anæmia and its constitutional symptoms. The vagina and uterus were filled with soft clot. The cervix uteri was widely open, so that the finger could be passed through it into the cavity of the body of the uterus, which was expanded so as to be of dimensions equal to that of a small hen's egg. The uterus was natural in other respects, bi-manual examination of a satisfactory kind revealing no deformation of it by tumour or otherwise. Ordinary treatment was used, and she recovered. The conditions found here had not previously been observed by me; they were so like those of recent abortion that, recognizing the greatest improbability of pregnancy, I made such inquiries as satisfied me that the risk of its occurrence had never been incurred.

The second case occurred in the practice of Dr. Pirie, of

Dundee, and I am indebted to him for valued notes regarding it. Unfortunately, a post-mortem examination was not permitted; but the case was so carefully observed and examined by competent men that it has positive value, even without such confirmation as an autopsy would have afforded.

This case was one of hæmophilia; and, in that point of view, it is worthy of study. I must satisfy myself by referring those who take an interest in this aspect of it to the work of Dr. Wickham Legg,* and especially to the chapter entitled, "On Certain Hæmorrhagic Diatheses in Women."

Almost entirely from the notes of Dr. Pirie I give the following account, which I preface by his remarks, that purpura spots and bleeding gums were present during most of the illness, and that epistaxis occurred more frequently than the occasions mentioned:—

M. R., aged nineteen years and eight months; a tall, well-nourished young lady, who had up to this illness enjoyed good health. Catamenia had been regular, but generally rather copious, the flow continuing for a week or a little more.

April, 1875.—Seized with an alarming attack of epistaxis, inducing syncope and prolonged weakness.

August 23.—Has been in good health since the epistaxis. Is now marked on arms and legs with purpura spots, which, she says, appeared soon after a quick walk to catch a train. Catamenia this month very profuse, and lasting for ten days.

September.—Purpura spots; gums readily bleed. Went for a trip in the Highlands according to Dr. Pirie's advice. When she reached Dunkeld alarming flooding came on, on the first day of the menstrual flow. Attended by Dr. Cuthbert; she lost a large quantity of blood, with numerous clots. Became anæmic and prostrate.

* *A Treatise on Hæmophilia.* London, 1872.

October.—About the middle of this month she returned to Dundee, pallid, waxy-looking, very weak. Strength was gradually regained, and she became able to go about the house.

November 10. — Catamenia returned, comparatively moderate in quantity, but lasted about two weeks. For a time the loss was profuse and some clots were passed, soft and of considerable size. Examination per vaginam revealed a patulous state of the cervix, which was otherwise healthy. No polypi seen or felt. Occasionally a clot in the open cervix gave the deceptive impression of a polypus. Clot could be expelled from the uterus by pressing on its posterior wall.

December.—Towards the end of this month catamenia again appeared, and after a few days became very copious. Numerous clots passed, occasionally with much pain. Anæmic, faint, pulse rapid and thready. Uterus injected with the liquor ferri perchloridi diluted with about one-third of water; this followed by immediate and continued arrest of hæmorrhage. At this time Dr. Matthews Duncan was first communicated with, who advised the iron injection, if required. After this, great improvement of general health.

January 14, 1876.—Catamenia began this day. This period passed with great loss.

February.—Catamenia not alarming in quantity.

March.—No notes kept. If catamenia did appear, the flow was not excessive.

April 11.—Health improving till this time. Has been out of doors, taking exercise. Takes food well. Catamenia have been present for a few days, rather copious, with occasional clots. Great weakness. As bleeding continued copiously, iron injection was again used, but in vain.

April 15.—Bleeding continues from womb, and epistaxis has begun. It continued till next day, when, after

consultation with Dr. Nimmo, the bleeding nostril was plugged.

April 17.—Dr. Matthews Duncan visited her to-day. Nasal plug removed. Menses still flowing. Pulse 120. Dr. D. found the os uteri open so as to admit a finger through it and the whole length of the cervix. The finger could be pressed through the internal os so as to detect the widely-expanded cavity of the body. The spleen was found to be large.

April 19.—As menses still flowed, a sponge tent was, at Dr. D.'s suggestion, passed through the cervix to dilate it for exploration of the whole uterine cavity. On the following day, the sponge tent having been removed, the uterus was examined by Drs. Pirie, Nimmo, and Grieg. Nothing was found in its cavity, nor any tumour or deformity of the uterus detected. Its walls were soft and flaccid. A drachm of liquor ferri perchloridi was injected into the uterus, causing much pain for an hour.

April 21.—Clots still coming away with red discharge. Pulse increasing in frequency. Strength failing. Is very exsanguine.

April 22.—Epistaxis severe; nostril plugged.

April 24.—Nasal plug removed; bleeding returned. Plug reintroduced. Os uteri plugged with lint soaked in matico infusion.

April 25.—Discharge from uterus slight, with clots occasionally. Pulse feeble, 144. Nose plugged.

April 26.—Continues as before. Uterus found filled with a clot which was expelled by pressure; was a pear-shaped cast of the uterine cavity, measured $2\frac{1}{2}$ inches in length. At the angles of its upper end, and corresponding to the position of the Fallopian tubes, was on each side a slender fibrinous cord. The upper part of the clot was firm, even somewhat tough, and the tubal cords were nearly 4 inches long.

April 27.—Unconscious.

April 28.—Died.

In the course of the treatment, iron and quinine, nux vomica, ergot, gallic acid, iron and turpentine, were at different times given. Astringent injections of alum were used; also the injection of sulphate of copper in powder, &c.

The only authors, so far as I know, who make any remarks bearing closely on this subject are Kiwisch, Scanzoni, and West.

In his chapter on fibrinous polypus, Kiwisch says:*—"The apoplectic effusion can in intelligible manner be only very inconsiderable in the contracted state of the uterus, yet it is to be remarked that under peculiar, to us unknown, conditions this effusion may be connected, through continuance for a considerable time, with contemporaneous expansion and softening of the whole uterus, especially, however, of the more yielding cervical canal, so that the blood-clot, as well as the cavity enclosing the same, reaches a not inconsiderable dimension." Kiwisch adduces no fact or case in confirmation of this view. It is the subject of fibrinous polypus that he is discussing; and no fact or case supporting his view has, to my knowledge, ever been published. My cases, above narrated, are of quite another kind. It is interesting, however, to note that the possibility of the expansion of the contracted uterus had occurred to his mind.

Kiwisch does not expressly suggest the possibility of the expansion of the virgin uterus, and his further remarks, as to cases of fibrinous polypus always occurring in women accustomed to sexual connection, do not encourage the belief that he had any good reason to entertain it. Besides, it is important to add that now the opinion is everywhere held that fibrinous polypus occurs only after abortion, miscarriage, or delivery at full time. No case of its occurrence, uncom-

* *Klinische Vorträge.* Prag 1851. S. 472.

plicated, at any other time has, so far as I know, been observed or published.

Scanzoni discusses the views of Kiwisch as of the original, and therefore somewhat imperfect, describer of fibrinous polypus. He says,* that "neither in the experience of others nor of himself is a well-made out case known in which the structure in question has become developed inside a quite normal, not dilated, uterine cavity surrounded by walls not abnormally distensible." In another passage† more pertinent to the subject, Scanzoni says: "We cannot allow it to pass unremarked, that we remember no case where, in a young individual of age susceptible of conception, an in some degree copious collection of blood had made itself known in the cavity of an otherwise quite healthy uterus." In yet another passage pertinent to the subject, he says: "Let us now admit that, as appears to us in no way possible, the completely healthy, unyielding uterine walls should, by blood collecting in its cavity, to which at the same time outflow is permitted through the open cervical canal, undergo such distension that its cavity might conceal a blood-clot as big as a hen's, or even a goose's, egg."

From these writings of Scanzoni it is plain that he had, much more precisely than Kiwisch, defined the open questions in this matter, and had reached definite conclusions regarding the matter, and for this we are indebted to him. Yet we hope that we have not only clearly expressed, but also corroborated, if not proved, by cases the opposite opinion —that it is quite possible that a healthy unimpregnated uterus may be distended so as to contain a blood-clot as big as a hen's egg, while outflow is permitted through the open cervical canal.

* *Lehrbuch der Krankheiten der weiblichen Sexualorgane.* IVte Auflage, 1867. S. 303.

† *Ibid.*, S. 299.

Dr. West* has not given any special consideration to the point we have been more particularly discussing. He agrees on the matter of the production of fibrinous polypi with Scanzoni, and appears to coincide with his views generally.

* *Lectures on Diseases of Women*, fourth edition, p. 254.

XXXVIII.

ON INTRA-UTERINE MENSTRUAL COAGULA.

I ADOPT this title because, when long ago I was considering the subject, my attention was strongly attracted to a paper by Dr. Haddon* bearing the same. But the title is, for me, far from being faultless, for it implies that the clot is formed of menstrual blood, which may be the case, but is by no means necessarily so. There are two good reasons for adhering to it—namely, that it is not easy to find another equally brief, and that it implies a distinction, which I am sure ought to be carefully maintained, of such coagula from what I call puerperal coagula, or those formed during the continuance of the puerperal state.

The laws of the formation of puerperal coagula are different from those of the formation of menstrual. The former are produced while the uterus is still large, and possesses a cavity larger than that of the virgin or ordinary healthy unimpregnated organ. While puerperal coagula are being formed the large uterus may be, and is very frequently, still further spontaneously dilated. The same cannot be said of menstrual coagula, or can be said only in very rare exceptional instances.

Menstrual coagula may be formed in the otherwise healthy virgin uterus, or in the otherwise healthy uterus of the unimpregnated woman, after the puerperal state has passed.

The cubical contents of the unimpregnated uterus have

* *Edinburgh Medical Journal*, January, 1872, p. 611.

been made matter of careful study,* and on this subject it is necessary to make some remarks. The cavity of the cervix is rarely a mere potential cavity, being generally almost replete with glassy mucus, in a mass of some thickness. The cavity of the body of the uterus is naturally rather a potential cavity, like that of the peritoneum, than a real cavity. It is a cavity of two dimensions, length and breadth, while its thickness is little or none, there being separation of the anterior and posterior walls only by a thin layer of uterine mucus. But the cavity of the body of the uterus, like that of the peritoneum, may, by the introduction of contents, become a real cavity of three dimensions. The uterus may be regarded as more distensible during life than after death, and as also probably more distensible during menstruation than at other times. When it is thus distended, without other alteration than arises from the change of the relative position of its walls, it may contain a blood-clot of some size. This blood-clot may reach a bulk equal to nearly one-half a cubic inch, its shape being that of a flattened and somewhat triangular mass.

That blood-clots not rarely occur in the otherwise healthy unimpregnated uterus there can be no doubt. Like many others, I have seen them in post-mortem examinations, and one is mentioned by Dr. West† as having been observed in a case where the loss of blood from the uterus was fatal from its quantity and long continuance. The clots which I have seen in autopsies have been soft. Such, during life, break down and are discharged as a brown fluid, or they may become harder and be expelled from the womb and from the vagina as dark-red clots. Regarding such menstrual clots, Scanzoni‡ expresses what is both the truth and the general

* See the chapter "On Some Points in Metrology," in my work, entitled *Researches in Obstetrics*, p. 435.

† *Lectures on the Diseases of Women*, fourth edition, p. 66.

‡ *Lehrbuch der Krankheiten der weiblichen Sexualorgane.* IVte Auflage. Band i. S. 299.

professional opinion, when he says: "With special reference to the peculiarities of the blood effused into the uterine cavity, we cannot allow it to pass unnoticed, that we recollect no case in which in a young woman, still within the age of capability of conception, a considerable copious collection of blood has been shown to take place in the cavity of the otherwise quite healthy uterus. In the most perfect cases, it was no more than a bloody layer loosely adhering to the internal surface, and placed with its long axis parallel to the long axis of the organ or a clot from 1—2‴ thick, presenting the three-cornered form of the cavity, and that projected more or less deeply through the internal orifice into the cavity of the cervix. The characters of such clots were less distinct in proportion as the death of the affected individual occurred at a more remote time from the last monthly period, so that no healthy uterus has come before us, in which fourteen days after last menstruation there was still to be found a trace of the bloody effusion that had taken place. We must, therefore, lay it down as a rule, certainly admitting only most rare exceptions, that blood effused through a healthy uterine cavity is always completely removed before the time of the next catamenial period, so that the clot produced in a former never can be enlarged by that of the next following period."

In this passage there are two important statements: first, that a menstrual clot never has been observed in the uterus by Scanzoni more than fourteen days after last menstruation, and that such a clot is always removed not later than next menstruation; second, that a menstrual clot is never augmented by additions derived from successive periods.

Upon the second assertion of Scanzoni I make no comment. It is a corollary from the first, and I know of nothing tending to an opposite conclusion. Especially, I never saw or heard of a menstrual clot having different layers of different ages and corresponding degrees of decolorization.

Scanzoni does not even mention a decolorized menstrual clot. Such a clot I have seen; and the case affords an example, which is one of the rare exceptions to what I have called his first statement, regarding the shortness of residence of menstrual clots in the uterine cavity.

Miss K., aged thirty-three (1856); has long suffered from menorrhagia, and recently from a thin brownish discharge. Hymen entire. Hymeneal orifice very small. Hymen ruptured by examining finger which finds in the vagina a body which is removed. It was in close apposition to the cervix uteri. It is a rounded, scarcely triangular, blood-clot, having the area of about a shilling and about a line and a half in thickness. It is dark-coloured in the interior, and on the surface completely decolorized at parts. No other morbid condition was discovered. My impression, formed and noted at the time, after careful consideration, was that it was a menstrual clot which had been expelled from the uterus; and I still adhere to that opinion. It is not inconceivable that such a clot should form in the vagina and become decolorized; but it is improbable. I have no doubt that this was a simple menstrual clot formed within the uterus and decolorized while there. It had no doubt remained there during a whole menstrual interval and been discharged from the womb into the vagina at the next succeeding catamenial period. The evidence afforded by this case, while it meantime satisfies me, is not absolutely conclusive. At all events it was such a clot, in point of size, as might be accommodated in a virgin uterus without supposing dilatation more than might take place through mere change of form in the menstruating organ.*

An interesting example of menstrual clot is recorded by

* Olshausen's case is probably like the one narrated in the text. (See *Die Krankheiten der Ovarien*, Stuttgart, 1877, S. 19). But there are not data justifying for it a place in any category. He describes it thus, Hæmatoma Ovarii dextri nach Scorbut. Zugleich polypöses Hæmatom der Uterus, und Hæmatosalpinx lateris sinistri.

C. Rokitansky.* He regards the case as one of fibrinous polypus, but that is a manifest error, for it had no attachment to the uterus and had not the shape of a polypus. He further regards the case as settling in favour of Kiwisch the question on the subject of fibrinous polypus which Scanzoni had raised: and this it is far from doing, for Rokitansky's case affords no evidence that the woman was a virgin or had not been recently pregnant, although this may be fairly assumed; and I assume this in placing it here. But Rokitansky's case does not show any enlargement and dilatation of the body of the uterus, such as Kiwisch postulated and made the chief point of his hypothesis as to the formation of fibrinous polypi. To this subject I shall presently recur; and I now subjoin notes of Rokitansky's case.

Josepha Zobel, an unmarried woman; said she began to menstruate the day before she had an accident, which proved fatal in five days. She was struck on the head by a tile while on a ladder, and had a fall which injured her head and spine very severely. In the autopsy, the ovaries were found rather large, the left united to its tube, and considerable false membranes stretched from it to the posterior side of the broad ligament and of the uterus as far as the bottom of the vesico-vaginal excavation. In its superficial layer posteriorly was a dark-brown coagulum enclosed by a quite thin greenish-yellowish stratum luteum. The right ovary studded with large peripheral follicles. The uterus, large, thick-walled, almost three and a half inches long; the body one and three quarter inches broad, and seven and a half lines thick. In the cavity of its body a three-cornered coagulum, ending

* *Wochenblatt d. Zeitsch. der K. K. Ges. der Aerzte in Wien*, 1866, No. 21. This case is reported by Gusserow in the *Medic. Centralbl.* 1866: and it is necessary to warn the readers of the latter that the case is there given erroneously in important particulars. Winckel (*Pathology and Treatment of Childbed*, Chadwick's transl., p. 161) appears inclined to adopt the erroneous view of Rokitansky as to the evidence afforded by this case against Scanzoni.

above on both sides in a short thin thread running to the tubes, below prolonged into a considerable spindle-shaped mass. This last lies in the cervix which appears spherically dilated; it is at the same time somewhat looser than the upper part found in the cavity of the body of the uterus. Both, however, consist of a peripheral reddish-brown fibrin layer, felt-like on its outer surface. In the interior is found a loose dark-red clot, besides a little equally dark fluid blood. The mucous membrane of the uterus is somewhat loosened in its texture with a surface just perceptibly felted. The orificium externum is rounded, freely permeable, without cicatrix. In the vagina some bloody slime.

This case, then, is an example of a so-called menstrual clot occupying both the body and neck of the womb; but, so far as the details go, neither of these cavities was dilated and enlarged beyond what is implied in mere repletion. The clot was formed while the canal of the cervix was patent, and no flexion or other displacement of the uterus is noted as having been present.

In the preceding chapter I have narrated cases that might, in a loose way of speaking, be said to present menstrual clots. But the soft clots of these cases appear to me to belong to a different category, and to demand separation, and separate consideration, from the subject of old menstrual clots. They are cases of hæmorrhage, and the clots were present while the hæmorrhage was going on and while the cervix was widely open, and not at any other time, so far as is known. No doubt they might possibly have come to present true retained menstrual clots, such as are described in this chapter; but their histories reveal no such occurrence as having actually taken place. Besides, in them, the uterine cavities were expanded to a greater extent than could be accounted for by mere change of form.

We now come to consider the question: Can the otherwise healthy virgin uterus, or the unimpregnated uterus at

a remote period from childbirth or abortion, be dilated by a menstrual clot beyond its ordinary dimensions when replete? In other words, do menstrual clots—say, of the size of a small hen's egg—occur, enclosed, in the otherwise healthy unimpregnated uterus? No one has, so far as I know, ever observed such a condition.

In a passage, which I quoted from Kiwisch, he expresses his belief that such an occurrence may take place. But it is to be remembered that he was trying to account for the formation of fibrinous polypus, and this at a time when little was known of that disease; and it is important to add that the difficulties experienced by Kiwisch have been overcome without adopting Kiwisch's hypothesis of dilatation of the body of the uterus. The theory, indeed, of fibrinous polypus is now, on the whole, satisfactorily made out.

Commenting upon Kiwisch, Scanzoni not only says that there is no history of the occurrence of such dilatation of a healthy unimpregnated uterus by a clot, but adds his belief that the notion is untenable.

For myself, I have no hesitation in meantime expressing my opinion that dilatation of the otherwise healthy unimpregnated uterus, so as to enclose and retain a large clot, is an occurrence not highly improbable. For this opinion I have three reasons: first, the histories of cases of dilatation with hæmorrhage such as I have narrated; second, the fact that the puerperal uterus, or uterus that has been recently pregnant, is capable of such dilatation; and, third, the almost certain occurrence of dilatation of the otherwise healthy unimpregnated uterus without the formation and retention of a clot within it. For the solution of the question whether Scanzoni's opinion or mine is right, we must await the arbitrament of pathological facts. The case of Rokitansky, as already reported, does not settle it.

I know that several authors, in systematic works, do, in a casual way, speak of such retention of clots as Scanzoni

declares to be incredible, but I do not refer to them specially. No cases or other relative facts are given by these authors in support of the assertions; and it is plain, on perusing the remarks referred to, that they are made without due and full consideration of the important points involved in the question we are considering.

The cases of menstrual coagula recorded by Dr. Haddon* would be sufficient evidence in proof of the opinion which I hold, did they belong to the kind of cases under discussion. In both of his cases the clot-mass was as large as a small hen's egg. One was from a woman, aged twenty-eight, supposed to be a virgin, but who had missed a monthly period. The other was from a breeding woman, who had also missed a period. In both the clots contained a cyst, having a smooth-lining membrane, and containing clear serum. These facts, recorded regarding them, make it plain that they do not come into the same category with the cases discussed here.

The great enlargement of the cavity of the body of the virgin or unimpregnated uterus when diseased is well-known; and clots may form within it and be retained, and become more or less decolorized. The cause may be inflammation, or cancer, or it may be a mucous polypus, or a fibroid in any situation. Of such clots the case of Schulhof,† commented on by Graily Hewitt, is an example.

It is a general belief that the cavity of the body of the uterus may be largely dilated in consequence of stenosis of the internal or external os uteri, or of obstruction produced by flexion;‡ but of this I am not convinced. If one could dare, in such a difficult and complicated question, to trust implicitly to a logical argument apparently sound, the question is settled by such personal experience as I have had.

* *Edinburgh Medical Journal*, vol. xvii. p. 611.

† *Transactions of the Pathological Society of London*, vol. xv. p. 169.

‡ See Graily Hewitt's *Diseases of Women*, third edition, p. 330.

For I have frequently seen dilatation without stenosis; and all the marked cases of stenosis which I have seen have been without accompanying dilatation. I have not seen dilatation for which there was no explanation but stenosis; nor have I read of such.

As an argument in favour of the probable occasional occurrence of a considerable clot with dilatation of an otherwise healthy unimpregnated uterus, I have adduced the almost certain occurrence of dilatation without the enclosure and retention of a clot within it; and I conclude this chapter by adducing an example that appeared in St. Bartholomew's Hospital.

F. C., aged forty; married twenty-one years; has had no advanced pregnancy, but five miscarriages, of which the last was at the third month, and four years ago. The catamenia began at fifteen, and have always been regular, profuse and painful; the pain commencing one or two days before the period, and decreasing as the flow became established. The pain is of a bearing-down character, with occasional shooting pangs. For the last four months she has not menstruated, but has had a copious white discharge. She complains of pain in the left iliac region, which has lasted for two years. Has been wearing a pessary for two years, and has undergone treatment for ulceration of the womb.

When she came into the hospital, her morbid condition was as follows:—Vaginal discharge slight; white, not offensive. Uterus slightly descended, feels bulky, slightly retroverted and retro-flected. Bearing down does not increase the displacement. Cervix large and patulous. Surface of cervix healthy. Mucus of cervix glassy. Probe easily enters uterus three inches, elicits no tenderness, gives the examiner the feeling of a considerable cavity of three dimensions. Uterus freely mobile. A tangle-tent introduced into cervix. Ergot to be taken by the mouth.

On the next day it was found that the tent of two and a

half inches in length had slipped high into the uterus. It was extracted with difficulty, and a larger and longer one introduced.

On the following day the uterus, pulled down by a volsella, was examined internally by the finger. Nothing was discovered except the dilated cavity of the body, easily admitting the finger for thorough investigation.

After this, for four days, hæmorrhage was considerable and then gradually ceased. During these four days she had, by a mistake of the clinical clerk, easily accounted for, taken each day an ounce of the liquid extract of ergot.

Seven days after the dilatation, the womb measured two and three quarter inches, and no morbid condition in situation, shape, or other respects could be found. Left iliac pain gone.

In this case a condition of endometritis might be suspected. But the absence of tenderness, and the absence of discharge, serous or bloody, seem to negative the supposition. The rapid cure, also, by tent and ergot do not favour it. As there was no kind of obstruction of the canal of the cervix, I can assert no distinctly morbid condition but the dilated cavity of the body of the uterus. Several gentlemen of experience saw the case, and suggested no difference of opinion from that here expressed.

Cases of this kind with hæmorrhage, or flooding, in women who have borne children, are not rare. But in such, the blood is not long retained as a clot, and the whole condition is temporary. While such cases are known in the woman who has borne children, they are, I believe, little known in the virgin. The two cases I have recorded in the preceding chapter occurred not only in virgins, but also showed such dilatation of the womb as is excessively rare in uteri apart from the conditions of recent childbearing or abortion.

XXXIX.

ON INTRA-UTERINE PUERPERAL COAGULA.

Puerperal coagula differ from menstrual coagula essentially in the time of their occurrence. Menstrual coagula may occur at any time during the child-bearing period of life, remote from childbirth or abortion. Puerperal coagula occur only in the period called that of the puerperal state, which is easily limited on one side by the delivery or abortion, uncertainly limited on the other side. This other limit is the period of the return of the uterus to its healthy unimpregnated condition—and into a nice discussion of this it is not necessary to enter—an interval of six weeks from childbirth or abortion being held to elapse before the puerperal state is quite passed.

The peculiarities of puerperal coagula which attract attention are their size, the liability of the uterus to increase in capacity as if with a view to contain them, the liability to hæmorrhage while they remain in utero, and the liability of the clot to form and maintain connection with the uterus and become a polypus.

It is evident from even a superficial study or a small experience that the liability to dilatation of the uterus increases with the nearness of the bleeding or formation of the clot to the delivery or abortion; and that the danger is greater in a like proportion.

On the soft and often adherent clots and the rapid dilatations of post-partum hæmorrhage this is not the place to

enter. That serious and too familiar accident is limited to a period comprised by, at most, the few hours immediately following delivery or abortion. When bleeding occurs later, it is generally called secondary hæmorrhage. Although this distinction is more or less formally and precisely made, it is justified almost exclusively by the rarity and less danger of the secondary hæmorrhage as contrasted with the frequency and greater peril of ordinary post-partum flooding. There is no essential distinction between primary and secondary hæmorrhage, so far as I know. There is no time in the puerperal state when a woman is quite safe from perilous hæmorrhage. There is no time in the puerperal state when a woman is safe from expansion or dilatation of the uterus and its attendant dangers. The subjects of puerperal clots and of hæmorrhage in the puerperal state, although different, are so germane to one another as to justify the introduction of these remarks on what is called secondary hæmorrhage.

Primary intra-uterine clots of childbirth or abortion are frequently retained for a few days, become firm from draining off of serum, and are then expelled with slight or severe after-pains. Such clots are generally so soft and broken as to retain little of the shape of the uterus. All this requires no proof; it is an occurrence familiar to the practitioner, and, were proof required, it could be easily produced. In passing, reference may be made to John Ramsbotham's* chapter on relaxation of the uterus after delivery, and its subsequent enlargement.

In describing puerperal coagula, I shall divide them into two kinds—first, those discharged from uteri which have not been dilated to an extraordinary size in order to accomodate them; second, those in which the uteri have become dilated just as they become dilated after contraction in post-partum hæmorrhage.

The puerperal coagula, which form and are retained in the

* *Practical Observations in Midwifery*, second edition, 1842.

puerperal uterus not specially dilated, vary in size according to the time at which they are formed, being larger, of course, the nearer in time to the delivery or abortion. Hæmorrhage may occur while they are retained, without displacing them.* They may be discharged entire, or they may break down and pass as brownish débris in lochial fluid.

"A not uncommon cause of secondary uterine hæmorrhage," says M'Clintock† "is the retention of a coagulum, or of a portion of the placenta or membranes. A coagulum of any size is not apt to be found in the womb beyond the first few hours after delivery, as a very moderate degree of uterine action would be sufficient to expel it or prevent its formation. Should it occur, however—and experience abundantly proves that it may—there will be a constant risk of hæmorrhage so long as the clot remains in utero. No doubt, the hæmorrhage in these cases is apt to go on continuously after the expulsion of the placenta, even with a tolerably firm contraction of the uterus, as Dr. Ramsbotham has well shown. But on other occasions there is an intermission in the hæmorrhage, and it may not come on for hours or days after delivery. Thus, a woman had frequently recurring attacks of hæmorrhage during the ten days following delivery, until at length the loss becoming dangerous and her strength much reduced, 'the hand was passed into the vagina, and the fingers introduced into the uterus, by which means some coagula were removed and the discharge ceased' (Collins)."

Of the formation and long retention of a large clot the following case is an example :—

Mrs. Y. H., a young recently-married lady, was confined of twins at the end of the seventh month of pregnancy. Both children soon died. There was a considerable and rather long-continued hæmorrhage post partum, and the

* *Practical Observations in Midwifery*, second edition, 1842.

† *Clinical Memoirs on Diseases of Women*, p. 334.

uterus was not brought, even at last, to firm, cricket-ball-like hardness of contraction. Her recovery was on the whole satisfactory, but the lochial discharge persisted of red tint. On the 19th, 20th, and 21st days of lying-in there was considerable secondary hæmorrhage, treated by ergot. On the 21st the discharge was chiefly red serum. During these days the uterus was felt to be bulky, but its size was not specially noted. The cervix uteri was patulous and dilatable, but not roundly open or dilated. On the 22nd day after delivery a large clot came away. It had the shape of the uterine cavity, being rounded in all its outlines, and it measured three inches in greatest breadth, and three and a half inches in length from the part corresponding to the internal os uteri. Below this part the clot was soft and broken. It had points indicating the position of the openings of the Fallopian tubes. Over the whole surface of its lower parts it was partially decolorized in the fretted style well depicted by M'Clintock; and on its upper part, corresponding to the fundus, the decolorized layer was dense and covering the whole surface. In the fundus of the clot a lacerated aperture was observed which easily admitted the finger, and which was presently accounted for. The bleeding was nearly, but not completely, arrested on the discharge of the clot. Five days afterwards, on re-examination, I discovered a fibrinous polypus and removed it. It was firmly adherent high up in the uterus. Its structure was of the ordinary kind, decolorized on the surface. It was of the size of a chestnut, and had chorionic structures in its pedicle. There could now be no doubt that the hæmorrhage flowed around the old clot, which was probably nearly as old as the polypus. It was not so old, for it had been formed around the polypus, and its displacement from the polypus, which it surrounded, left the lacerated opening in the clot which was observed at the time of the discharge of the latter, but was then thought to be accidental.

In his memoir* on polypus of the uterus, Dr. M'Clintock relates a case. "In proof," says he, "that a coagulum may be formed in the uterine cavity soon after parturition, and be retained there for a considerable time before being discharged, I may mention the following case which fell under my notice last spring, when temporarily in charge of the Lying-in Hospital for Mr. Denham. Dr. J. R. Kirkpatrick was good enough to furnish me with the particulars, of which the following outline will suffice:—A young woman was delivered naturally of her first child February 19. Twenty-four days afterwards there passed from the vagina, without pain or any considerable bloody discharge, a very dense, firm coagulum representing an exact mould or cast, even to the Fallopian orifices, of the uterine cavity. . . . . Externally it had a mottled, dark-red and black colour, and towards the centre it was of a lighter shade of red, and not quite so compact in structure. It presented no sign of decomposition. She had not shown any uterine symptoms from the time of delivery."

In the two cases just given, the intra-uterine puerperal clots were old and partially decolorized, not putrid. A case is referred to by M'Clintock,† as narrated by Lachapelle,‡ which, although not quite satisfactory in its details, seems to show that such clots may, instead of growing hard and decolorized, become putrid. "Another interesting remark," says Lachapelle, "which this observation may furnish us, is the return of the hæmorrhage at so late a period, without our being able to attribute it to any other cause than the presence of two somewhat voluminous clots, whose fœtidity proved their age." The patient had been delivered, at the full time, of twins. The labour was tedious. The membranes were ruptured after about twenty hours of pains, and

* *Clinical Memoirs on Diseases of Women*, p. 191.

† *Ibid.*, p. 334.

‡ *Pratique des Accouchemens*, tom. ii. p. 474.

the first child was soon born. The second quickly followed, and then a bilobed placenta. Severe hæmorrhage ensued and continued for five hours, uterine inertia being at last dispelled by injections of cold water. The woman did well till the eighth day, when she got up; and then a little blood flowed. Hæmorrhage continued, although the woman was put to bed, till two fœtid clots were discharged. The woman was taken with shiverings, vomiting, fever, &c., and died the following day.

In cases of ordinary secondary hæmorrhage it is not rare to find the uterus relaxed and full of soft clots; and it is often recommended, and practised, to remove these clots, in order to facilitate or secure uterine contraction and retraction. Examples of this are not rare in practice. Sometimes such cases are fatal, and then the clots, often adherent, may be observed at the autopsy. Cases are related by Collins, Ingleby, Ashwell, M'Clintock; and several references may be found in my paper on the introduction of the carbolized hand into the uterus at long periods after delivery.* All such cases are justly regarded rather as cases of hæmorrhage than of clots, just as in the analogous post-partum hæmorrhage.

There is another class of cases of great importance, mention of which cannot be omitted, where, in consequence of the retention in utero of some adherent ovuline structure, the involution of the uterus is retarded in a remarkable degree, or completely arrested, till the adherent mass is removed, and then involution again makes progress. Of such occurrences I have recently seen several striking examples, where though the still-retained mass was very small, not bigger than a small hazel-nut, yet involution was arrested for weeks or months, and hæmorrhage had proved almost fatal. In such I have removed firm, old, but not decolorized clots. Such clots do not interfere with the hæmorrhage, seeming, indeed, to encourage it; and they are

* *British Medical Journal*, Oct. 27, 1877, p. 583

often discharged with more or less pain, new ones being formed in the place of the former. I shall not relate the particulars of any such case, but only refer to one which I mentioned in a former lecture.*

I cannot advance to the subject of fibrinous polypus without making special remarks on a case of M'Clintock's† which he, indeed, calls one of fibrinous polypus, but which cannot be regarded as truly such. For he describes the tumour as "not seeming to have any attachment to the uterus, but simply retained by the constriction of the os." The case, then, is very rare, if not unique, and deserves quotation at length, being an unattached decolorized puerperal clot resembling a fibrinous polypus, except that it was unattached and contained no ovuline structure. It is right to note M'Clintock's tone of caution, which justifies the remark that the case is not quite conclusive as it stands. "A married woman, aged thirty-five years, applied at the Lying-in Hospital Dispensary, in the month of September, 1861, on account of frequently recurring bloody discharges from the vagina. These had been going on for three months, but were at no time very profuse in quantity. On making an internal examination I found the os uteri open, and a soft fleshy substance, which had all the feel of an ovum, protruding from it. With the aid of a volsellum I drew it away. This was effected without the use of force, the tumour not seeming to have any attachment to the uterus, but simply retained by the constriction of the os. The body so removed was totally devoid of fœtor, and was about the size of a large hen's egg, but more elongated, and pointed at the ends. It was tolerably firm, but could be cut with a blunt instrument such as a spatula. Its exterior was of a reddish-yellow colour, and within it was apparently composed of coagulated blood. It contained no vestige of a distinct membrane, nor any structure properly belonging to

* See p. 20.

† *Clinical Memoirs on Diseases of Women*, p. 190.

the ovum. This woman had had an abortion or a premature labour (I forget which) about four months previously."

Into the whole subject of true fibrinous polypus I do not propose to enter. Many such cases have come under my observation. They all occurred in connection with recent pregnancy, and were the cause of continued loss of blood, sometimes copious, sometimes inconsiderable. They were all easily cured by removal of the polypus. In all there were ovuline structures in the pedicle or near the attachment of the mass. In most the shape was polypus-like, and the body of the polypus lay in the dilated cervix uteri. In one, already related in this chapter, the polypus was within the body of the uterus. In one case the polypus had not the shape of a pear, but was largest at its broad insertion, smallest at its intra-cervical portion: it followed an abortion, and was recent, being scarcely decolorized on the external surface.

In his original writing* on fibrinous polypus, Kiwisch, as is well known, thought it probable that the uterus was relaxed, and enlarged or dilated, in order to contain it. His view has been generally rejected, and it is to be remembered that he was writing the first lines penned on the subject, and in ignorance that such polypi were observed only in women who had recently been pregnant. Dilatation of the uterus will be admitted to be easier, and therefore more probable, in a uterus which has recently been pregnant than in one not in the puerperal or lately emptied condition; and I know no good reason for positively denying that such dilatation of the cavity of the body of the uterus ever takes place.

But it is important to remark that we have no clinical evidence that, in order to contain a fibrinous polypus, the cavity of the body of the uterus undergoes special dilatation. It is, indeed, in consequence of its recent repletion

* *Klinische Vorträge*, 1851, Abtheilung I., S. 472.

in pregnancy, already in a dilated condition. The structure of such polypi and their history show that they are generally, if not invariably, formed of one attached clot, which shrinks and hardens as it undergoes decolorization, and is generally expelled from the cavity of the uterus proper and lodged in that of the cervix, so far as its body is concerned, while its stalk in the proper uterine cavity maintains the connection of the body of the polypus with its attachment.

I come now to consider the second class of cases, in which the proper uterine cavity is enlarged or dilated, and that probably very rapidly, in order to contain and retain the puerperal clots.

Rapid enlargement of the uterine cavity is well known as a not rare occurrence soon after parturition. This enlargement is too rapid for growth of tissue to have any part in its production. Growth of tissue goes on in regulated concurrence with the expansion of pregnancy; and even in morbidly rapid or extreme expansions there is at least time for growth of tissue to aid in the expansion. Of extreme expansion, often with thinness of wall, examples are found in the hydramnios of advanced pregnancy, and in some cases of uterine hydatids, where it may occur to a marvellous degree either in early or late periods of the gravid condition. But of such expansion as we here consider better illustrations are found in the (too few) post-mortem experiments of Glenard, and in the cases of introduction of the hand into the uterus at long periods after delivery.*

Ingleby† mentions that a case, "in which so late as the nineteenth day after delivery the uterus was emptied of a large quantity of putrid blood, shows its capability of distension at this remote period." In my own practice

* See *British Medical Journal*, Oct. 27, 1877, p. 583; see also a case published by Braxton Hicks, in the *British Medical Journal* for July 22, 1882, p. 132, where the hand was introduced a month after delivery.

† *On Uterine Hæmorrhage*, p. 248.

a well-observed case occurred, in which the sudden dilatation with formation of intra-uterine clots occurred on the ninth day after delivery. Mrs. S., a healthy young woman, was attended by me in 1862 in her first confinement. It was easy and natural. Eight days after her confinement, while she was making a satisfactory recovery, she was seized with faintness and a free discharge of blood. When I reached her, I found the uterus enlarged to about the size of a four months' pregnancy, its fundus rising above the pubes to fully half-way towards the navel. It was by kneading made to contract and expel large firm clots. Ergot and pressure maintained the retraction. When reduced in size, the uterus did not feel more bulky than it would be expected to be on the ninth day. It is a curious fact that this woman, delivered on December 3rd, was again delivered on September 29th of a mature, well-developed child, which came into the world a fortnight earlier than the day calculated by the doctor in attendance. She had had within four weeks after delivery what she described as a scanty anticipatory menstrual flow.

The cases of relaxation and dilatation of the uterus in the puerperal state, when there has been no retention of ovuline structures, which have come within my observation or reading, have been cases of hæmorrhage rather than of puerperal clots. In Ingleby's case, where the clots were fœtid, there is evidence of retention of clot for a considerable time; but I know no case where the decolorization of the clot indicated length of retention in utero. But there is no apparent reason why such an occurrence may not take place; and M'Clintock's case of so-called fibrinous polypus is the nearest approach to its realization. It would, indeed, be a case in point were there any evidence that the uterus had been expanded to contain the decolorized clot which he removed.

The following case, recorded by Ludwig Joseph, is so rare,

and has such a distinct bearing on the subject under discussion, that I subjoin it, although the clot was not puerperal. Here, the blood, which accumulating, filled and probably distended the uterus, did not surround a previously existing fibrinous polypus as in my case (p. 401), but a polypoid uterine fibroid of small dimensions. The whole repletion or distension was not from the first by blood as in my case, but at first by the polypoid fibroid and subsequently by blood. The alliance with such cases as mine is recognized by Joseph in the title which he gives to his paper:* "A Contribution to the Etiology of Fibrinous Uterine Polypi." In his case, not in mine, the blood-clot remained long enough in the uterus to become like a simple fibrinous polypus, and it, in a characteristic manner, dilated the cervix. The uterus was in a state of firm retroflexio-versio, and Joseph regards this as an almost insuperable hindrance to the exit of the flowing blood from the uterus, which therefore stagnated and coagulated. But such an appreciation of the power of the flexio-versio is almost ridiculous. It would be nearer the truth to describe it as having no influence whatever, for Joseph's figure of the expelled mass shows a flexion not reaching the acuteness of an angle under 90 at any part, and dimensions on a cross section equal to those of a section of the little finger. With such shape and dimensions one can imagine some practical resistance to passage of a firm blood-clot, but not to passage of blood.

The patient was a coffee-house keeper, of fifty-five years of age, who had been a widow for six years, and lived in comfortable circumstances. She began menstruation at sixteen; and, in natural labour, gave birth to a daughter before she was thirty. Menstruation ceased at forty suddenly, and without giving any trouble. She had suffered much from rheums, and had long complained of palpitation, shortness of

* *Zeitschrift für Geburtshülfe und Gynäkologie*, 1882, Band viii. Heft 1, S. 68.

breath, loss of appetite, and weakness, so that she kept her room. In summer, about nine months before the report, she was suddenly, and without any warning, seized during a walk with severe hæmorrhage which necessitated her quick return home. Without cramp, or labour-like pain, large soft clots came away and the bleeding was stayed; but a slight blood-coloured loss persisted, and, several months later, she had another hæmorrhage with expulsion of large clots. As the loss did not entirely cease, she consulted him in January. In addition to former symptoms, she now had constipation, tenesmus, sometimes severe sacral pains, and bad sleeping, and she had been for months confined to her room.

She is a small, pale, old woman, who can only rest when propped up in bed. Insufficiency of the mitral valve. Abdomen much distended and tympanitic, but no tumour nor dropsy can be made out. Internal exploration reveals a retroflected enlarged uterus, which is also retroverted. The vaginal portion looks upwards and forwards, and lies close behind the symphysis pubis. The mouth of the womb is open enough to admit the tip of the finger, but not far. The lips of the os feel thin and are continuous. Attempts to move the fixed uterus cause severe pain. The finger comes away stained with bloody mucus.

Four months later, a large body was discharged with severe labour-like pains and considerable bleeding. On the subsequent day the uterus was found as before, but the cervical canal more open. The discharged mass was like an abortion, and its shape suggested that it was a cast of the uterine cavity. It was retort-shaped, and had a rounded broad end and a smaller end bent on the chief mass almost at a right angle. One side of the greater end was more convex, and presented a greyish yellow appearance, while the other was nearly smooth and as if tinted with blood. At the under part of the greyish yellow substance was some less fresh blood, which

made it evident that this was the place where the discharged mass had adhered to the uterus.

The whole body was 8·3 cm. long and 3·8 cm. broad. In its larger end was imbedded a myomatous polypus, 2 cm. long and 1·3 cm. broad, whose detached surface was seen to be greyish yellow as it formed part of the surface of the whole mass. The polypus could be easily detached from the old blood clot surrounding it, which had a homogeneous appearance, without stratification, and was soft and easily broken down. Its external part was decolorized, its internal or central blood-red. The case was one of fibrinous polypus having a fibrous polypus for its basis and attachment.

In my case a fibrinous polypus was surrounded or enclosed by a more recent effusion of blood, which might have become a secondary fibrinous polypus.

XL.

ON FŒTID PARAMETRIC AND PERIMETRIC ABSCESS.

The following case of parametric abscess terminated fatally while chloroform was being administered for its opening. It is here narrated because the resonance of the abscess extended to the thigh, because the abscess led to dilatation of the ureter, and because of some points connected with the communication established between the bowel and the abscess. I derive the facts of the case from notes by Mr. Cronk, resident midwifery assistant, St. Bartholomew's Hospital.

S. S., aged forty-five, charwoman; was admitted into "Martha," in St. Bartholomew's Hospital, on April 23, 1881. She had been married twenty-two years, and had borne eight children, of which the youngest was ten weeks old. She had had four miscarriages, of which the last was two years before admission. She had not nursed, and had not menstruated since her confinement. Two days after delivery she had rigors and pain in the hypogastrium, and she had been ill and unfit for getting up ever since. Seven weeks before admission pains began in the hips and right groin, and had become gradually worse.

Between April 23 and May 14, when she died, her pulse varied from 90 to 120, and her temperature rose in the evening to 103° or 104°, and was in the morning three or four degrees lower.

On admission, the right thigh, which was moved with pain, was kept bent at an angle of about 30°. Decubitus

on the left side, the patient's ordinary position when in good health. Nothing except tenderness could be found on examining the hypogastric and iliac regions. Per vaginam, a digital examination found the uterus elevated, moved backwards, and fixed; a dense, tender, only slightly convex hardness connecting it with the right posterior side of the brim of the pelvis. In the right groin, just below Poupart's ligament, and extending from about the inner third of the ligament outwards, below the iliac spine, and on to near the great trochanter, and extending from above downwards about two inches, was a slight fulness that would not readily attract attention. The part presenting fulness was slightly tender, and gave an indistinct feeling of fluid. The same part also gave to the manipulating fingers a feeling of gurgling, not resembling emphysematous crackling, and it was resonant on percussion.

Lying in bed she became much more comfortable, her symptoms all less severe, about the beginning of May. She was even able to extend the right leg completely for a short time, and she slept on the right side, or that of the disease (the usual decubitus in parametric abscess). But the improvement was evidently not substantial, and she again became gradually and slightly worse. There was no evidence of pus pointing in any part. Around the abscess the tissues became hardened, enclosing it.

On May 14, after consultation with Mr. Willett, it was decided that he should open the abscess. An incision was made below Poupart's ligament, and four or five ounces of healthy-looking pus with fæcal odour were discharged, with some fœtid gas. Nothing of the nature of solid or fluid fæces was discovered. The finger could be passed from the incision below Poupart's ligament to the right side of the pelvic brim.

She had taken chloroform quietly and naturally. After the incision Mr. Cronk observed that the pulse gave a few irregular beats and ceased. A long inspiration was followed

by expiration and death. Attempts at resuscitation, long and vigorously made by the chloroformist and assistants, failed. The quantity of chloroform used was estimated as a drachm and a half.

Post-mortem, from notes of Dr. Norman Moore, pathologist. —Body well nourished. A wound above two inches long in right groin. Abdomen full. Calvarium and meninges normal. Lungs firmly adherent at bases by old adhesions. Heart freely movable in pericardium; valves natural; cavities all quite empty; tissue soft, not mottled; weight nine ounces. Liver normal. Spleen soft, enlarged, weighing seven and a half ounces. Kidneys normal, except the presence of a cyst in the left. Bladder normal. Uterus healthy. Right ureter obstructed, and dilated, to a size exceeding that of tense repletion, by pressure of thickened tissues in pelvis. Ovaries thicker than normal; in the left a cyst of the size of a hazel-nut. Right psoas muscle infiltrated with pus in its lower part. An abscess in the pelvis, extending from lowest lumbar vertebra, inside the cæcum, which bounded it to the right; on the left it was bounded by thickened matted tissues comprising the uterus and a loop of the sigmoid flexure, which was firmly adherent to it. In this flexure was a small opening which would easily transmit a pin's head, and in the intestine was some yellow pus. The abscess, enclosed by hardened thickened tissue, extended downwards beneath Poupart's ligament to the upper part of the thigh.

It is to be noted that, in this case, the abscess communicated with bowel of the opposite side of the body.

When an abscess is found to contain fœtid pus, it does not generally, on that account, receive the designation fœtid: it is spoken of as an abscess containing or discharging fœtid pus. When, in addition to fœtid pus, an abscess contains fœtid gas, then such an abscess is generally called fœtid; but ordinarily an additional condition is implied in the name fœtid abscess,

namely, communication of the abscess with the bowel. No doubt most abscesses containing air do draw it by some opening from the intestines; it is intestinal gas that is in them. But many fœtid abscesses—that is, abscesses containing fœtid air—have no communication with the bowels, and of such we have often examples in "Martha."

When, in addition to fœtid air, an abscess contains or discharges solid or fluid fæces or other matters that pass along the intestinal canal, then intercommunication of abscess and bowel is certain. An opening has taken place, allowing of (but not necessarily followed by) mutual interchange of contents between the two: and the abscess is called fæcal.

The discharge of pus from a perimetric or parametric abscess into bowel is generally recognized by the diminution of the abscess and the appearance of pus in the stools. If, however, the opening of the abscess is high in the intestinal canal—as, for instance, in the small gut—or if the amount of pus discharged is very small, as in the case narrated, there may be no pus seen in the stools. The discharge of air from an abscess into the bowel cannot be recognized except by sudden diminution in the amount of air in the abscess.

Air in perimetric or parametric abscess may be derived from the abscess wall, from decomposing pus or blood, or from the intestinal contents through a channel of communication between the abscess and the bowel; and the last is the most frequent source.

Before a fœtid abscess is opened the source of the gas cannot be decided. Some circumstances may make it probable or improbable that it is derived from the bowel, namely, the region occupied by the abscess, the sudden or slow appearance of a large quantity of gas in the abscess, the more or less distinct feeling of fæces in it. After the opening, or at the time of opening, the source of the fœtid air may be made plain by the discharge of fluid or solid fæces or other matters derived from the intestine.

When pus and fœtid air alone are discharged from such an abscess, there is difficulty in deciding the interesting question of the source of the fœtid air. We have held that the air was not derived from the bowel when it was discharged with considerable force at opening, when it was discharged only at or near the time of opening, when the odour of the gas was only putrid, not distinctly feculent, and when the abscess healed in a usual way. But these conditions when present singly or combined, do not settle the point.

Air passing from the bowel into an abscess generally enters a cavity in which it is securely enclosed; but it is possible that it may emphysema-like permeate the cellular tissue; and, in the case narrated, Dr. Godson described the earliest feeling of the air-containing part as that of emphysema. When I first saw the case the feeling was distinctly not that of emphysema, but of air-gurgling, and it suggested the presence of hernia, an idea which was excluded by the remote and peculiar position of the air-gurgling and of the resonance on percussion. But it is quite possible that emphysema in these parts preceded suppuration or extension of abscess into them, and that what Dr. Godson felt was true emphysema; and it has, in connection with this emphysema anticipating abscess, to be noticed that at first the air was surrounded by no hardened tissue such as appeared subsequently and at last formed a distinct boundary to the abscess.

This case and many others illustrate the passage of air alone from the bowel into the abscess; and I believe this to be a matter of great importance in some cases. In cases which have two openings, the second opening being made by Nature or artificially as in our case, the passage even of fæces into the abscess is not of first-rate importance, for the feculent matters can pass out of the abscess, and the abscess heals well. I have put on record a case of parametric abscess bursting into the rectum, in which the abscess

became repeatedly filled and again partially emptied of fæces and air, so illustrating the passage out of the abscess of fæces even when there was only one opening. But such evacuation of the abscess would surely not be complete; some feculent particles or masses would remain. In parametric and perimetric abscesses having only an opening into the bowel and containing only fœtid gas in addition to pus, there may be sapræmic symptoms long present; but the abscess may heal, the air being absorbed or expelled. But when fæces are in such an abscess they are not likely to be expelled, and cannot be absorbed; and, besides, in cases which I have examined post-mortem, the fæces evidently caused great inflammation of the abscess wall, and sometimes even sloughing.

When a communication is established between a parametric or perimetric abscess and bowel, the process is ordinarily described as the bursting of the abscess into the bowel. The behaviour of a subcutaneous abscess is invoked, and the perimetric or parametric abscess is supposed, like most subcutaneous abscesses, to point and actively burst. But in all this there is too much assumption or mere guessing.

In many cases there is good evidence of this being the real course. The abscess may be felt bulging into the bowel, pointing, and the discharge is sudden and copious when the opening takes place. A similar course is followed in many abscesses opening into the bladder or discharged per vaginam. But this course, though common, is far from forming a universal rule.

In some cases, as in that recorded here, there never is any tension of the abscess walls, never any visible pointing nor reason to suppose it. Ulceration, in my opinion, probably beginning in the abscess cavity (*i.e.*, at the peritoneal surface in perimetric abscess) establishes a communication between cavity and bowel. There is no active discharge into the bowel, but a little pus may pass the opening. There is no

discharge into the abscess from the bowel, but air may pass from the latter into the former.

The physical properties of gases give them a power of passing which renders their entering the abscess practically easier than the entering of liquids, and still more of solids. But liquids and solids may pass into the abscess-cavity. I cannot, however, admit that liquids or solid fæces, although they may pass or be drawn into the abscess-cavity, can, except in a very rare combination of conditions, be propelled or burst into it. In other words, while an abscess often bursts into bowel, bladder, or vagina, it must be extremely rare for anything to occur like a bursting of bowel, vagina, or bladder into an abscess-cavity. The passage of liquids and solids into abscess-cavities (or ovarian cysts) from these viscera I have elsewhere discussed (see my work *On Perimetritis and Parametritis*, p. 167), and I shall here only repeat the utter inapplicability of the valvular theory ascribed to Dupuytren and extensively adopted, a theory implying such an opening as permits in most cases only of liquids leaving the abscess, not of anything entering it. This theory cannot be entertained by any one who has seen the actual openings.

The existence of communication between replete cavities without any active interchange of contents from one to the other, or *vice versâ*, is illustrated in the fœtal heart, in abscesses communicating with arteries, and in other cases.

Before concluding, it is to be remarked that no symptoms distinctly referable to the dilatation of the ureter were noted. Yet it is possible that pains about the hips, which the patient described as coming on in the course of her illness, may have been due to this obstruction to the flow of urine; and in other cases of ureteral dilatation I have connected with this pathological condition pains in the hips and flanks, and urine sometimes copious, generally of low specific gravity.

XLI.

ON TWO CASES OF NERVE LESION IN GYNÆCOLOGY.

I DRAW attention to the following two cases as briefly narrated, on account of their being uncommon; they are the only two of the kind that I have met with during two years of practice in St. Bartholomew's Hospital, and on account of the considerations attached to them regarding remote pains or disorders in connection with diseases of the womb and ovaries.

The modern literature of the diseases of the unimpregnated uterus and of the ovaries is replete with descriptions of pains, disorders, and diseases in remote parts, represented as directly dependent on them, and especially on such as are in other respects of minor importance. The whole of this special uterine pathology I reject as being, meantime at least, unworthy of any place in medical writing. The whole heap of such statements has to be subjected to scrutiny, and I feel sure that such scientific sifting will leave, as a real and true residuum, but very little. That little will be of great value.

The importance of recognizing the absence of any specialty in gynæcological pathology is well expressed in the trite maxim, First a physician, then a gynæcologist. The therapeutics of the diseases of women are not founded on peculiar knowledge; there are no peculiar methods, no special mysteries. It is a natural error, though not on that account to be condoned, to invest with too much dignity and too widespread influence the diseases of organs which are specially studied, an error long well known, and illustrated in the daily practice

of special physicians, one finding the roots of most diseases in the stomach, another in the liver; one in gout, another in hysteria. The specialty is in the physician, not in the disease; and every special physician ought studiously to oppose this inevitable tendency to err from the truth.

Special pathology is quite a different matter from special practice, or devotion of individuals to a limited department of medicine. Scientific progress, increasing the wealth of knowledge, and also its power in a limited area, while it destroys specialty and demonstrates unity of pathology, renders specialty of practice almost a necessity. The human mind is incapable of acquiring, assimilating, and quickly using in practice, more than a portion of pathology, with all its little details of knowledge and skill.

Pains, disorders, and diseases indirectly dependent on diseases of the unimpregnated uterus and ovaries are well known, and need no special description by the gynæcologist. When one member suffers all the members suffer with it. Such indirect consequences should never be confounded with those that are more or less direct: they are included in general pathology, not in limited gynæcological pathology, as are those which are more or less direct. Anæmia, for example, may be a direct consequence of the bleeding produced by a uterine polypus. Cardiac blowing murmur, palpitations, headache, may be indirect consequences. The direct results, bleeding and anæmia, are gynæcological. The indirect results, palpitations and headache, are in the domain of general pathology. The limited gynæcologist ends by describing polypus as a disease producing loss of blood and anæmia. He wanders beyond his limited field when he describes the ulterior results of anæmia. He positively errs if he describes headache as a symptom of polypus.

In teaching clinically and in conducting practice, the gynæcologist must march solemnly from his limited department into the field of general pathology or of general therapeutics.

Mere knowledge or practice of limited gynæcology is insufficient. Indeed, as already said, strictly speaking, there is no special gynæcological pathology, nor gynæcological therapeutics, which is an important part of pathology, But there is a well-known limit of pathology called gynæcological, and all within this limit is often, and with a certain justice, called special.

Scientific or systematic gynæcology should either not pass beyond its proper limit, or, if it does so, it should make such overstepping of the boundary distinctly recognized. Much difficulty and error arises from authors either disallowing this limit, or, if recognizing it, yet not enforcing its recognition. The best modern literature of the diseases of women is replete with such errors as are illustrated in describing palpitations and headache as the result of polypus, instead of placing them as consequences of anæmia, by whatever cause induced.

I here make only allusion to the still grosser and very common error of ascribing pains, disorders, and diseases in remote parts to uterine or ovarian disease, when there is no connection between them, whether direct or indirect.

According as special physicians study successfully the limited area of gynæcological pathology will they diminish the present vagueness of description of symptoms, and consequent indefiniteness of the information they give. Pain is the great symptom of disease, and our familiarity with it, in various kinds, degrees, and situations, has prevented fulness of attention to it. We are all easily attracted to what is striking or rare, while we naturally neglect that the importance of which is attested by its commonness and our consequent familiarity with it.

Now-a-days, pains are described, of various kinds, degrees, and situations, with little precision, and nothing further is made of them. But it is important always to keep in mind that the day is coming when every pain, and each of its variations, will bear a distinct message to the physician as

to the disease of which it is a symptom. At present, for example, we say that, in a certain case of cancer, there is complaint of acute pain in a groin, aching in the back and down the limbs, or a combination of them, without trying to make out of what condition within the pelvis each of these symptoms is the reflection.

The quality of remoteness in situation of symptoms is one that already commands some attention. It is common, in describing diseases of women, or gynæcological diseases, distinguished from diseases of pregnancy, to name infra-mammary pain as a direct or regular symptom of uterine engorgement or chronic uterine inflammation. I know of no direct uterine symptom so remote. The flushings of the menopause are equally remote, but then they are widely diffused over the body, and most likely the result of a more general nervous lesion, affecting probably the vaso-motor system. The vomiting of severe dysmenorrhœa is more remote, but it is an indirect result of the pain, as is shown by the details of its history.

Excluding such symptoms as are the result of mere mechanical pressure from great enlargement, I know no direct symptom more remote, upwards, than the region of the kidneys. Pains arising from diseases of the unimpregnated female rarely occur in that region; frequently and characteristically near the lowest lumbar vertebræ and sacrum. They occur also in the hips and thighs, the groins and hypogastrium; never in the legs and feet.

I have often known pain between the shoulders and in the higher lumbar or dorsal region, or indeed anywhere, referred directly to uterine disease. But long experience and some amount of care in observation have revealed to me no good basis even of suspicion of such direct connection. Such good basis might be found in uniformity of character in, or frequency of concurrence with, certain uterine or ovarian conditions.

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bably malignant degeneration of the nervous trunks before they pass through the left great sciatic notch. In this region there was dense cancerous induration felt by the finger. Disease in this situation, whether inflammatory or malignant, often causes pains in the thigh resembling those of sciatica. The disorder of motion added in this case is rarer than the disorder of sensation, and indicates a different kind or seat of lesion.

J. S., aged twenty-eight; was admitted into "Martha" on January 1, 1878; married one year and eight months; had a child eleven weeks before admission. She says she had a very bad labour in which forceps was used; that afterwards she had aching pain in the womb, and that now she is unable to walk from pain in the sole of the left foot.

Digital examination per vaginam discovers a long cicatrix running along the left side of the vagina from the cervix uteri to near the os vaginæ. On the right side of the vagina is a similar cicatrix, only shorter. Through the speculum the cicatrices can be seen; they are not completely healed at some points. The foot is small, well shaped, pale, and presents to the eye no unnatural appearance. Pain is described as shooting about the foot. Gently touching any part of the sole produces no pain, but firm pressure affecting parts deeper than the skin is very painful. The area painful on firm pressure can be mapped out with some precision; a transverse band over the distal ends alone of the second, third, fourth, and adjacent part of fifth metatarsal bones; a rounded spot at the proximal end of the first metatarsal bone about an inch in diameter; a rounded spot fully two inches in diameter at the posterior part of the sole, just in front of the seat of insertion of the plantar fascia into the calcaneum, and a little to the outside of the middle line. Pressure over the posterior tibial nerve below the knee and behind the ankle elicits pain in the pressed part. There

is no pain on pressing the peroneal nerve at the head of the fibula.

She says she has had no pain above the knees; that her present illness began six weeks after her confinement with a feeling of stiffness under both knees. She had been going about for a fortnight before the stiffness came on. Both feet were soon affected. Then she began to improve; and a fortnight from its commencement the disease had disappeared in the right knee and foot. Now she describes only the affection of the left foot, which disables her from walking.

She was kept in bed and treated with a liberal diet and tonics (iron and arsenic). The foot was frequently fomented with hot water. Improvement gradually increased, and seventeen days after admission she left the hospital nearly well. The posterior tibial nerve was probably the seat of inflammation.

Under what circumstances the forceps was used in this case I have no information, and cannot therefore judge whether or not the vaginal injury was inevitable. The case is an illustration of a rare result of injury done by this valuable instrument.

It is often and most erroneously described as a "perfectly harmless" proceeding to deliver by forceps. While there is no injury necessarily the result of the use of the forceps, yet it is quite certain that both mother and child run great risk from forceps delivery, however judiciously and skilfully performed. Ignorance of the occurrence of injuries arises from the practitioner not looking carefully for them.

It is not even theoretically required that the forceps should do no injury. In fact, in most cases, such as those of slight obstruction, there is more laceration in forceps delivery than in spontaneous birth; and it is natural to expect this result. But while this anticipation of increased local injury from forceps interference is far from being sufficient to preclude it, increase of local injury nevertheless implies increase of

danger to life, and it is therefore necessary in every case to have careful preliminary weighing of the comparative gains and losses from a proposed use of the forceps, so far as the gains and losses can be anticipated.*

* See two recent interesting cases by Ramskill (*Obstetrical Journal*, Nov. 1880, p. 678), and by Roberts (*Lancet*, Jan. 8, 1881, p. 54). See also Champneys on similiar lesions connected with malignant disease in the pelvis (*London Obst. Trans.*, vol. xxii. for 1880, p. 19).

XLII.

ON THE MORBID ANATOMY OF DOUGLAS'S POUCH.

I SHALL, in the following notes, describe chiefly what I have myself seen; and I shall, first of all, give a brief account of two cases which are rather monstrosities or malformations than examples of morbid anatomy, as that term is ordinarily used.

Dr. Champneys lately* showed to the Obstetrical Society of London the internal genital organs of a female. At the bottom of Douglas's pouch and on its anterior wall was a flat, pocket-like, secondary pouch, large enough to receive the first joint of the middle finger. It ended in an angle inferiorly, its lowest point being 1½ inch below the level of the os uteri externum, where it might take part in forming a vaginal hernia.

Some years ago, along with Dr. Underhill, I dissected the pelvis of a bulky, married woman, who had no vagina. On examination,† the external genital organs appeared to be natural. An irregular, slightly elevated, hymen-like, mucous fold surrounded the part representing the vaginal orifice, where was a pit three-quarters of an inch deep and in contact with the peritoneum. The ovaries were present and had numerous cicatrices. The Fallopian tubes were three inches long. At the junctions of the tubes with the liga-

* *Obstetrical Transactions*, London, vol. xx., 1878, p. 124.

† The pelvis and the internal genital organs of this woman are preserved in the Museum of St. Bartholomew's Hospital.

ments of the ovaries were fleshy nodules nearly as big as a pea, each tapering in a direction towards the other, and disappearing after a course of nearly an inch on the posterior surface of the bladder. The posterior surface of the bladder was smooth, covered by peritoneum; and when the posterior wall of the bladder was grasped between two fingers, nothing was felt that might be supposed to represent the uterus. There was nothing like a round ligament of the uterus to be seen or felt. The rectum was normal, except as to the extent of its peritoneal covering.

The peritoneum passing over the fundus of the bladder to its posterior surface covered it smoothly to about $2\frac{1}{2}$ inches below the level of a line joining the round ligaments of the ovaries, or down to the indistinct vesico-sacral ligaments. The ovaries and Fallopian tubes lay near the margin or brim of the pelvis, separated from one another by the peritoneal layer of the posterior wall of the bladder, and when this was gently stretched, there was a peritoneal interspace of about four inches. The meso-salpinx was nearly natural, and was attached laterally to the peritoneum near the brim of the pelvis.

Beneath what would be the natural position of the lowest part of Douglas's space, was another deep peritoneal pouch communicating with the general peritoneal cavity by an opening bounded by the bladder, the vesico-sacral ligaments, and the rectum. This cavity was easily expanded, without stretching, so as to have at least two inches in diameter in all directions; and inferiorly it touched the perineal structures. The peritoneal lining extended to about an inch below the internal opening of the urethra; it covered the small mucous blind sac representing the vagina, and it covered the rectum to within an inch of the anus.

This amount of enlargement of Douglas's pouch, or descent of the peritoneal cavity, cannot be regarded as a new formation or mere expansion of a previously healthily

or ordinarily constituted peritoneal pouch. It is not morbid in the usual sense of that word, but a malformation or extraordinary formation, to be classed with those malformations of the peritoneum often seen in deformities of the abdominal organs. But great though this unusual extension of peritoneal cavity is, it is yet far exceeded by morbid states which we shall hereafter describe.

In three cases of malformation closely resembling that described, that is, cases of absence of all traces of vagina and internal genital organs discoverable during life, I have carefully examined with my fingers the accessible portions of the pelvis, and have found mobility and looseness of parts, and other conditions scarcely to be described in words, which led me to believe that in them the same arrangement of peritoneum existed.

In cases of epithelial carcinomatous growths of the posterior lip of the cervix uteri invading the adjacent vaginal laquear, it sometimes happens that the prominent mass is not nearly so great as it seems. In such cases the projection is not solid throughout, but is formed by a fold of the affected tissues, causing a sort of doubling of them, and enclosing within it a sac of healthy peritoneum, or a descended portion of Douglas's pouch. The operator, when amputating such a mass, by écraseur or galvanic wire, finds in the removed part a peritoneal pouch, and through the opening thus made in the peritoneal cavity he may pass his finger and feel the nearest intestinal folds; and this has repeatedly happened in my own experience.

Several cases are described in which intestinal hernia has descended towards the perineum, forcing the pouch of Douglas before it. Of this no example has come under my observation. But I have seen a remarkable hernia-like descent of this peritoneal fold through the vagina pushing the posterior wall of the passage before it and coming to bulge, like a procident uterus, outside the vulvar orifice.

The patient had occupied a bed in the Royal Infirmary of Edinburgh,* having an ovarian cystoma which had long been burst, and had discharged so copious an amount of very viscid clear jelly as to distend her abdomen extremely. An attempt was made to draw it off by paracentesis abdominis, but in vain, on account of its viscidity. In the latter weeks of her life a rounded firm tumour protruded from the vagina, sometimes more, sometimes less. It was regarded by the nurse as a falling of the womb, and was not carefully examined during life. At the post-mortem investigation made by Dr. Wyllie, it was found to be a hernia of Douglas's pouch. At the bottom of the recto-vaginal fold was an opening admitting two fingers, which established communication with the hernial sac, descending between the rectum and vagina, and then protruding into the latter. The sac was larger than a hen's egg. It was full of very viscid gelatinous ovarian fluid, which adhered to its peritoneal surface.

The practitioner searching, by digital vaginal examination, for diseased ovaries, not rarely finds them prolapsed or descended below the level of the cervix uteri, and pushing the roof of the vagina before them in such a manner as implies great expansion and descent of Douglas's pouch. During life this condition can be clearly made out only when the ovaries are loose in the peritoneal sac, not adherent to it. In the Museum of St. Bartholomew's Hospital is a specimen of this descent, in a well-marked degree, of an ovary which is hypertrophied, being of the size of a hen's egg. The preparation is 2,925 in the Museum Catalogue. The ovary appears to be quite loose in a new or lower Douglas's pouch, for its main bulk lies below the level of the os uteri. During life this could no doubt have been easily felt, and the nature of the case might have been suspected.

The practitioner digitally examining, per vaginam or per rectum, can often feel that Douglas's space is empty, pushing

* See *Obstetrical Transactions of Edinburgh*, vol. iv. p. 326.

his finger into it, inverting the peritoneum, and feeling the utero-sacral ligaments in various states of thickness and tightness and tenderness, bounding it to right and left; while his finger displaces the previously adjacent uterus and rectum, or uterus and other organ, such as ovary or fold of bowel.

On the other hand, he can often, in morbid conditions, feel that it is replete. When it is replete, it is also generally expanded and also generally descended. This state of repletion is often not felt, or very indistinctly made out, in cases of hydroperitoneum or ordinary ascites, but sometimes it is clearly present. Especially distinct it is when a layer of fluid surrounds a prolapsed ovary, or still more when hydroperitoneum surrounds an enlarged ovary or a fibroid projecting into and expanding the pouch.

Serum, pus, or blood accumulating in Douglas's space, fills it, expands or stretches it, and generally causes descent of it. When such fluids in this pouch are enclosed above by coherent or mutually agglutinated organs, the examining finger does not enter the pouch pushing the lowest or first reached part before it, but feels it as a convex and generally as a more or less solid mass; the feeling of fluid being often entirely absent, while the contents are both liquid and thin. And it must be added that the feeling of fluid is sometimes present when the contents are constituted by a soft solid.

Repletion of Douglas's pouch, with fluid enclosed superiorly by coherent organs, involves displacement of parts. The displacement caused by repletion of the rectum has been studied, and the observations of Pirogoff and Garson may be referred to. In rectal repletion the uterus is pushed forwards and upwards. The displacement caused by vesical distention has been also attended to, and the observations of Pirogoff, Simpson, and specially of Hart* may be referred to. In vesical

* See Hart and Barbour, *Manual of Gynæcology*, 1882.

distention the uterus is pushed backwards, its fundus being moved backwards and downwards.

The displacements produced by repletion of the pouch of Douglas are not the same in all cases, but there is, in the absence of any complication, a prevailing uniformity. The posterior vaginal wall and especially its upper parts are, along with the adjacent peritoneum, greatly extended or stretched, that is, they form a much greater surface. They are also pushed downwards and towards the posterior surface of the bodies of the pubic bones. The posterior wall bulges in a globose form into the potential cavity of the vagina. The rectum may be, in its middle third, similarly extended, having its cavity flattened between the pouch of Douglas and the sacrum, or it may be merely gently compressed, without extension, between the pouch and the sacrum. The uterus is pushed forwards to behind the pubic bones; and as accumulation in Douglas's space increases, it is pushed upwards till its cervix is at or above the level of the upper border of the symphysis pubis—conditions that imply great displacement and distortion of the bladder.

The amount of development or extension and descent of the posterior wall of the vagina varies greatly, and this is not regulated merely by the degree of repletion of the pouch of Douglas or the quantity of fluid contained in it. In other words, the roof of the cavity, formed by coherent organs, may, by increasing repletion, be developed and ascend to compensate for diminished development of the pouch inferiorly, and descent into the pelvic excavation or beyond it. What the forces are which, in a chronic case for instance, determine the development and descent of the lower part of the cyst, that is, of Douglas's pouch; or, on the other hand, the development and ascent of the roof of the cyst, that is, of the coherent viscera, it is difficult to determine. No doubt softness and easy displaceability or mobility forms an element of it, but it appears to me to be chiefly regulated by the

pressure relations of the abdomen or its so-called retentive power. When intra-abdominal pressure is small and natural, or great, there will be descent. When intra-abdominal pressure is absent or negative, there will be ascent.

It is not fluids only which may occupy and distend Douglas's pouch, but also, occasionally, a retroverted uterus, whether gravid or not, an enlarged ovary, or a fibroid, or folds of intestine, or an extra-uterine fœtation.

The great degree of development and descent of the posterior vaginal wall is often a subject of interesting clinical demonstration. Lately, in "Martha," I opened a uterine hæmatocele of considerable size, occupying the whole pelvic excavation and bulging upon the orifice of the vagina. The slightly elongated uterus was lying behind the lowest part of the abdominal wall, its cervix being felt at the upper margin of the symphysis pubis. The opening made by the bistoury into Douglas's pouch was not more distant than an inch from the vulva. Students who might naturally have difficulty in regarding this as an incision into the peritoneal cavity were convinced by the predicted results of examination a week or so afterwards, when the contents of the pouch were completely discharged and the parts had resumed nearly their natural position. Then the scar of the incision was reached, only after intrusion of the whole length of the finger, and found just behind the cervix, which part also was now nearly in its natural situation. Similar demonstrations I have repeatedly made in cases of serous distension of the pouch, or of ordinary retro-uterine perimetric abscess.

The descent and especially the development of Douglas's pouch make it an easy matter for the surgeon to interfere with it. In the natural condition it would be difficult or impossible to introduce a bistoury into Douglas's pouch without doing more than was intended; but when it is pushed down it is easily reached, and when it is expanded it can be opened without any danger of the bistoury or trocar

touching parts other than those in which the wound is desired.

The pouch of Douglas may be pushed down much farther than in any of the cases to which we have alluded, far beyond the limits of the pelvic cavity or even of the vulva. This is common in one set of cases, those of procidentia, where the pouch comes generally to lie in contact with the lowest part of the extruded supra-vaginal portion of cervix. But I have seen it even farther protruded when replete with pus than it is in cases of great procidentia. The case was one of hydatids in Douglas's pouch, with general pelvic prolapse, and especially procidentia of the posterior vaginal wall. The procidentia was prevented by pessary, but only imperfectly; and the patient gave up its use. She was seized with peritonitis, and was brought once more into the hospital, apparently moribund. From this state she recovered. Abscess formed in Douglas's pouch, which was now protruded far beyond the vulva, forming a tumour there larger than an adult fœtal head, the uterus remaining high in the pelvic cavity. I opened this freely, and putrid fœtid gas, and pus, and hydatids were discharged in large quantity. The patient survived for some weeks. On a post-mortem examination, hydatids were found in various parts of the abdomen, and the conditions diagnosed in the pelvis were confirmed by the autopsy.

Rare cases are recorded by Rokitansky and others, in which the pouch of Douglas and adjacent vagina, distended by a retroflected and retroverted uterus, have sloughed, leaving the peritoneal covering of the fundus uteri bare. Dr. Brewer has put on record* a case in which, through an opening in the vagina, an ovarian cyst was pushed beyond the vulva. The woman was in labour, the head descending. The tumour was successfully removed. The cyst is No. 3085 in the Museum of St. Bartholomew's Hospital.

* *Obstetrical Transactions*, vol. xx. p. 184.

In one case, which I observed, the fundus of a retroverted uterus pushing before it the pouch of Douglas descended, not into the vagina, but into the rectum, and so far that the fundus projected through the anus when strong bearing-down effort was made.

In conclusion, another great rarity may be mentioned. It was observed by Freund.* In it there was great procidentia, and the pouch of Douglas descended, unchanged, carrying with it the rectum to the lowest part of the prolapsed mass In most cases of procidentia there is no rectocele or only slight pouching anteriorly above the sphincter, and in such cases the relations of Douglas's pouch to the rectum are greatly changed, descent taking place apparently with elongation or development of the part of the peritoneal reflection which joins the rectum and uterus, a long and wide extent of posterior vaginal wall being covered by peritoneum. This peritoneal development is, in ordinary procidentia, closely analogous to that which takes place when the pouch of Douglas becomes filled with any fluid. Then, also, as already described, the posterior vaginal wall is extensively covered in its extended state by peritoneum. In Freund's case there is no reason to suppose that the peritoneum of Douglas's pouch was in any way materially altered.

* In Fritsch. *Lageveränderungen der Gebärmutter.* S. 180. *Handbuch der Frauenkrankheiten,* redigirt von Billroth. III. Abschnitt.

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